

Operationalizing Net Zero: Best Practices for Managing Scope 1 & 2 Today

CBSR Net Zero Working
Group (NZW/G) #10

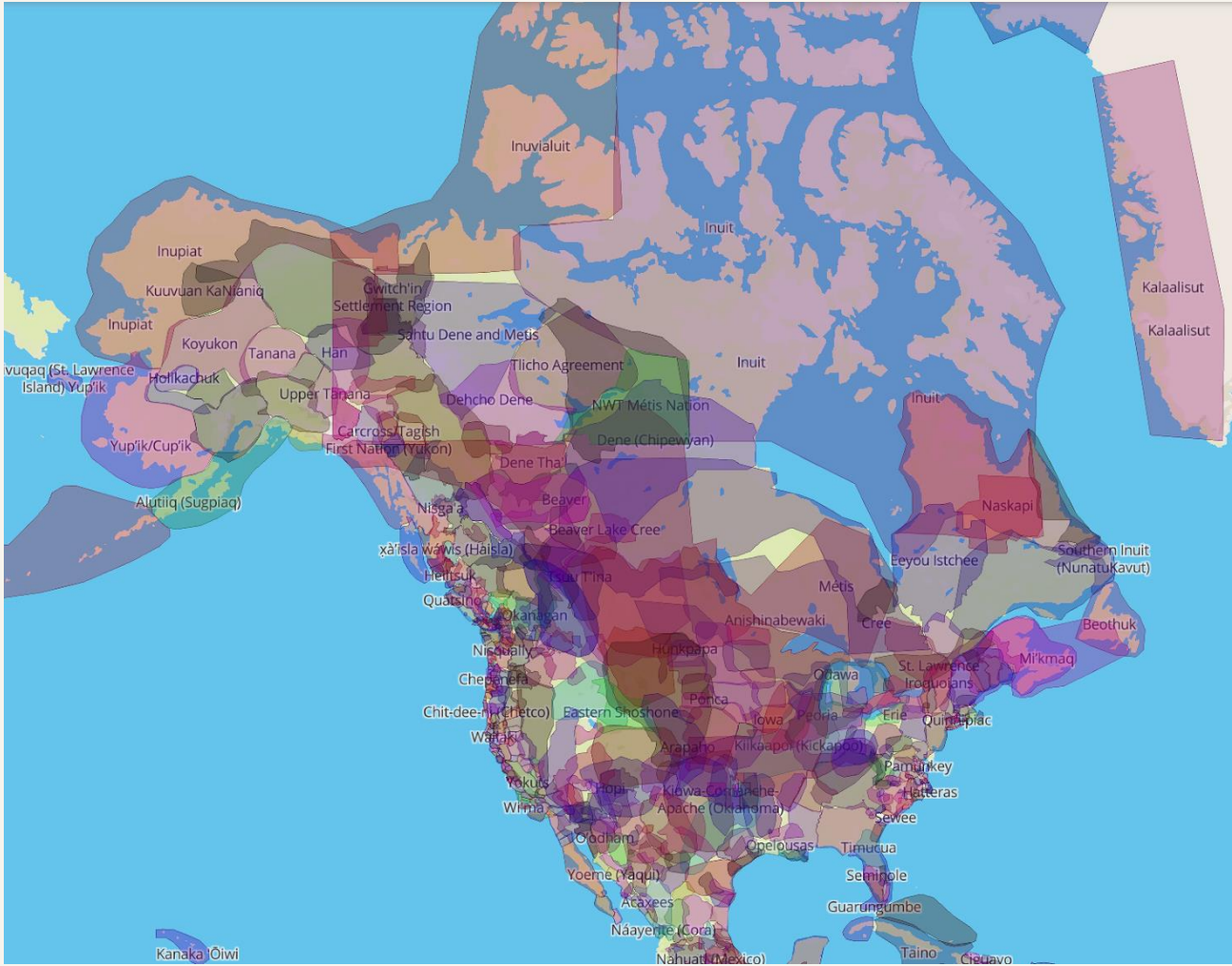
What is the Net Zero Working Group (NZWG)

The **Net Zero Working Group** convenes corporate & EXCEL CCSR members to advance the adoption and implementation of net-zero ambitions. By providing resourcing and peer inputs, we support Canada's top net-zero leaders and build their capacity to accelerate their progress towards climate targets.





We are guests on this land



LEARN

- Learn more about the land we are on and it's history:
<https://native-land.ca/>

REFLECT

- How does the history of that land interact with you? What did you learn while doing your homework?

ACT

- What actions are you going to do to support the Indigenous communities around you?
- Read about the Truth and Reconciliation Commission of Canada and its 94 Calls to Action.

Virtual House Keeping



Chatham House Rule is in place



Adjust your Zoom display name to show:
Your name, pronouns and company name



Encouraged to switch on video & actively
participate in the chat box and discussions



Tech questions? You can also ask them in the **CHAT**



Agenda

12:00 – 12:05	Welcome & Introduction <ul style="list-style-type: none">• Land Acknowledgement, Housekeeping and Upcoming CCSR initiatives
12:05 – 12:15	Context Setting <ul style="list-style-type: none">• Definitions, Canadian & Corporate Emissions data and Absolute vs Intensity targets• Poll
12:15- 12:25	Safe Bets & Mitigation Hierarchy
12:25 – 12:40	Breakout Discussion <ul style="list-style-type: none">• What strategies/solutions has your organization implemented and what was that the outcome?• What is one ERM your organization could leverage in the next 2-3 years to address scope 1 and 2 emissions?
12:40 – 1:00	Member Spotlight: Bullfrog Power <ul style="list-style-type: none">• Market Instruments to reduce scope 1 & scope 2 emissions
1:00 – 1:10	Internal Mechanisms to Accelerate Decarbonization
1:10– 1:25	Breakout Discussion <ul style="list-style-type: none">• How is your organizational culture either supporting or hindering progress?• What internal mechanism is your organization considering?
1:25 – 1:30	Wrap up

Meet our Speaker



Julia Zeeman *Programs Director*

Julia is responsible for advancing CBSR's corporate sustainability programming. She has expertise advising Canadian businesses on decarbonization pathways that embed corporate sustainability across business functions.

Before joining CBSR, Julia worked with electricity and natural gas utilities, as well as various government levels. Her advisory work spanned electricity planning, policy on electrification, decarbonization, and distributed energy resource integration. Julia also contributed to the design and delivery of energy conservation and efficiency, demand side-management, and renewable energy programming for electric and gas utilities.



Context Setting



Workshop Considerations: We want to meet you where you are at

There are a lot of ways for Canada to get to net zero

Every business is on their own journey

Focus on commercially available solutions

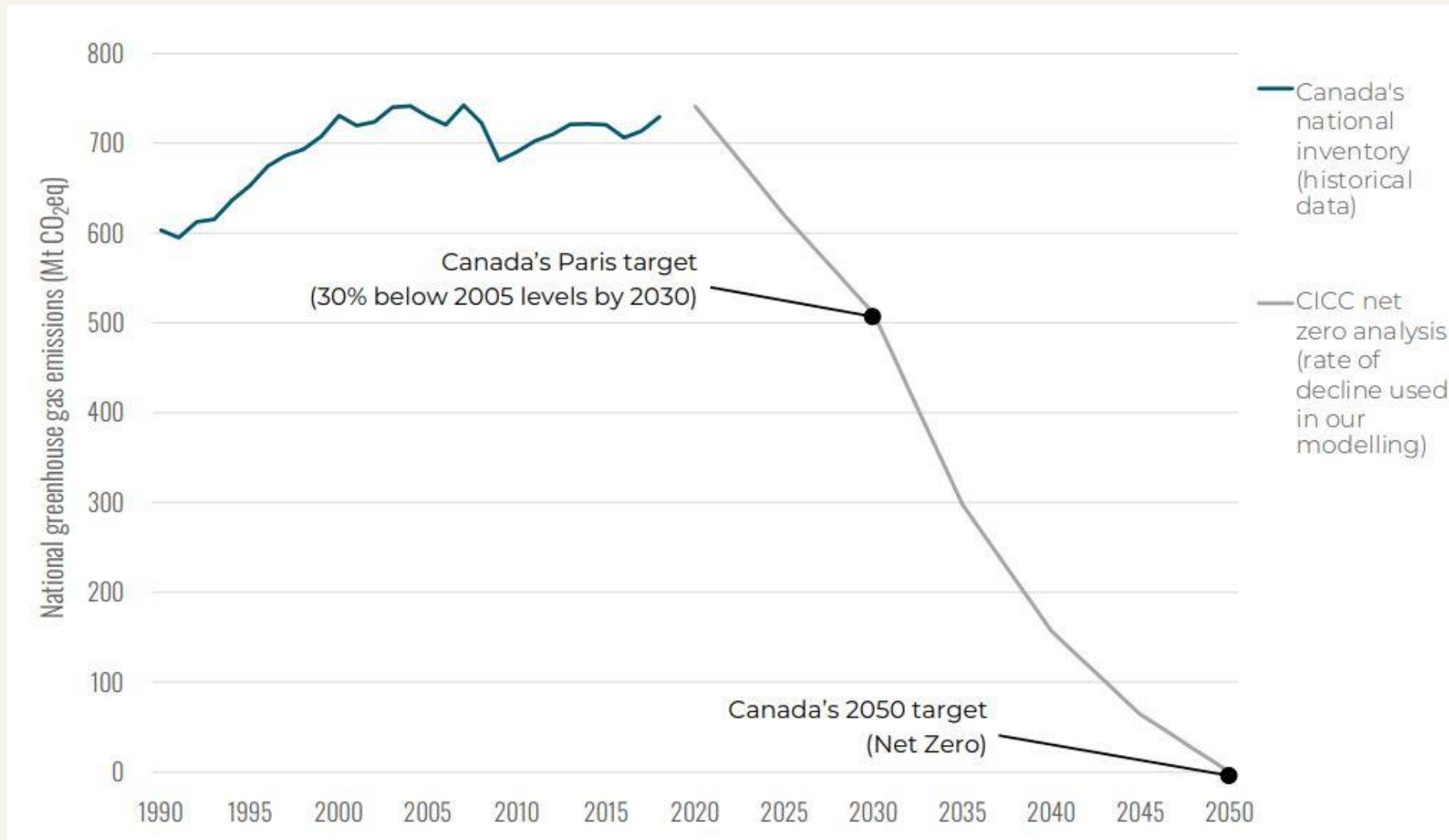
Remain curious & technology agnostics

Identify commonalities to support each other as a peer group

Uncertainty and disagreement regarding the future shape of a net zero economy and energy system cannot justify delay



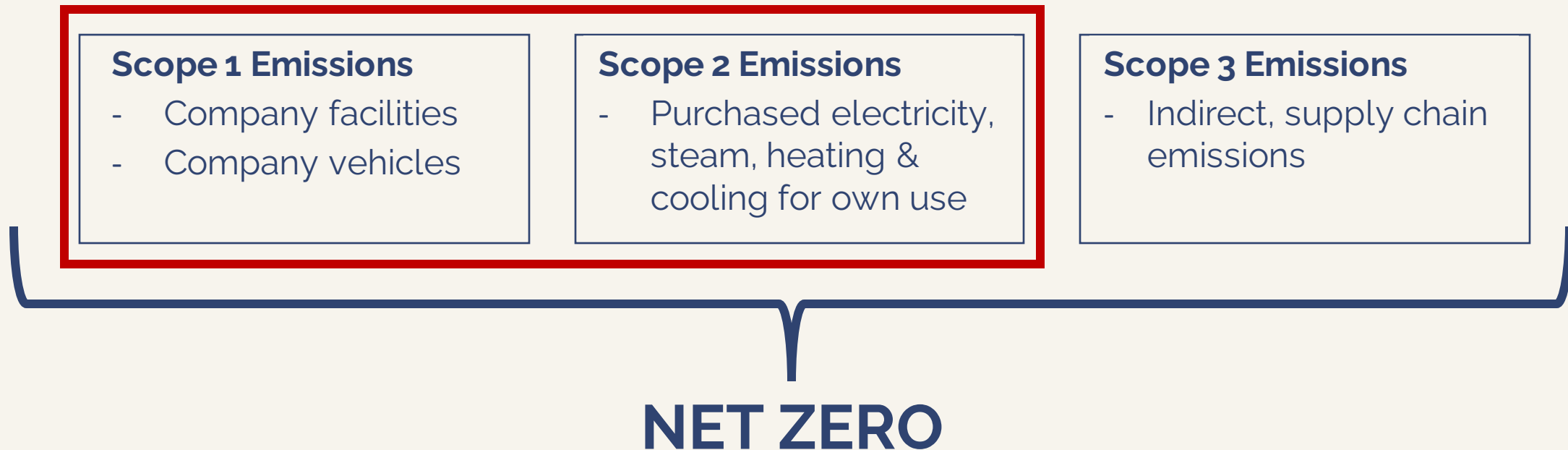
Historical Emission Data and the Path to Net Zero



Context Setting: Operationalizing Net Zero

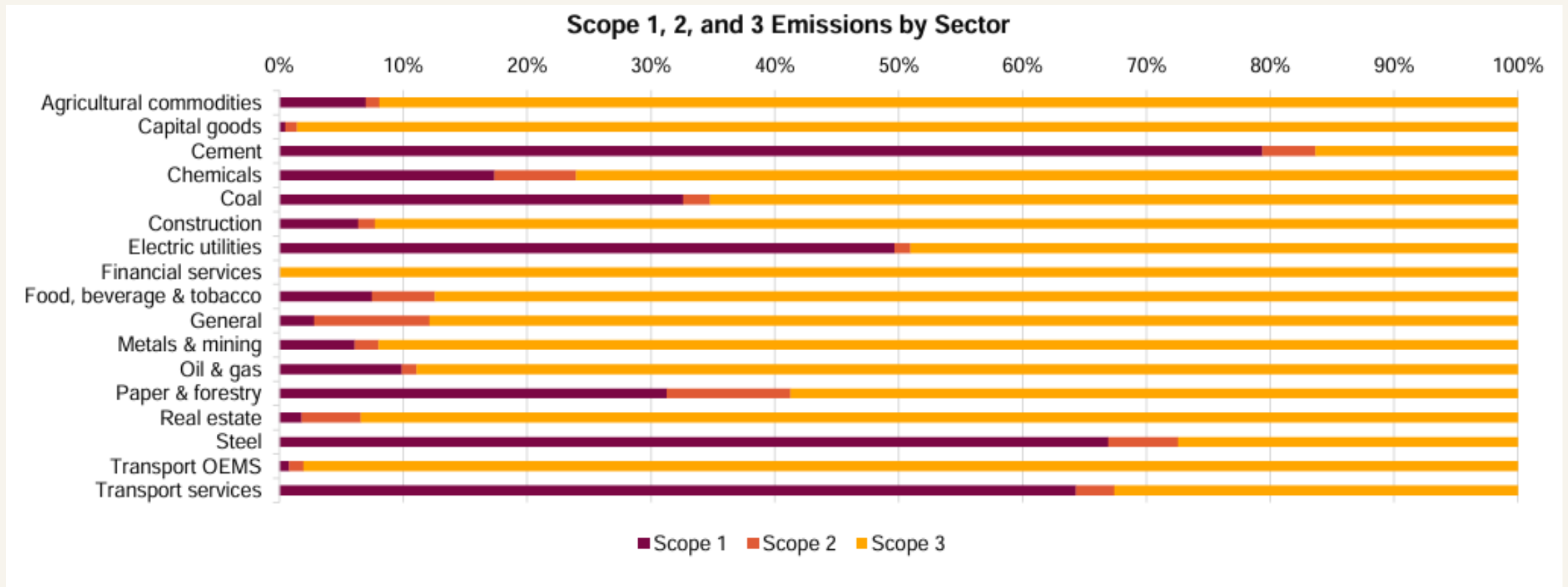
When we say, "Operationalizing Net Zero", we mean that we want to revisit the role of scope 1 and 2 emissions on the journey to net zero.

Today, we will be discussing how we can reduce operational emissions to advance our organizations towards net zero.



Context Setting: Going Back to Basics

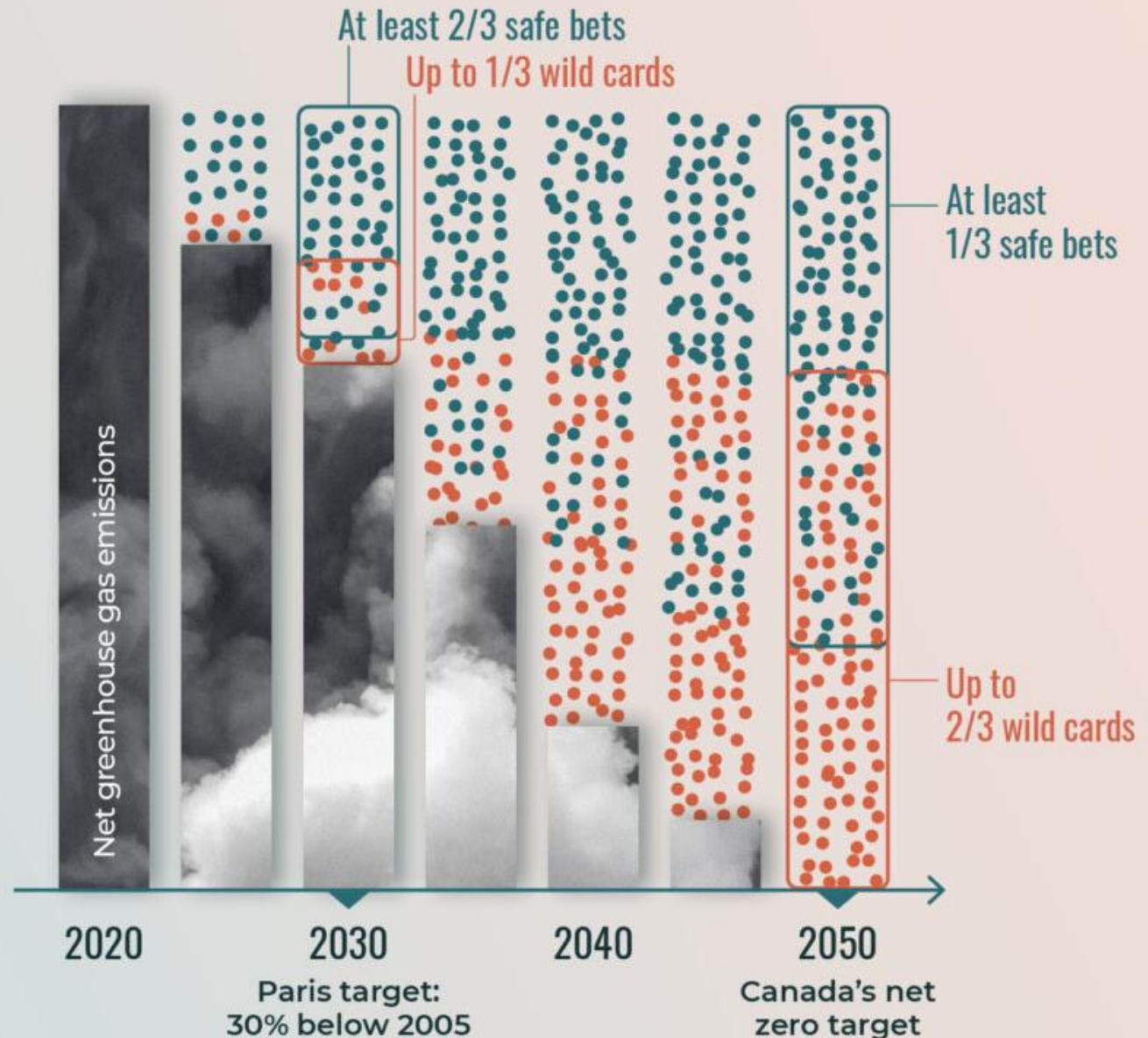
In **some industries**, **scope 1 & 2** can account for **more than 50%** of their total emissions.



A winning hand

Safe bets are critical to short-term results. **Wild cards** are important for unlocking the deeper, cost-effective reductions that can get Canada to its net zero target.

At least **two-thirds** of emissions reductions in 2030 would likely come from safe bet solutions, with less than **one-third** generated by wild cards. By 2050, these proportions could switch. In scenarios where wild card solutions prove cost-effective and scalable, they could provide up to **two-thirds** of Canada's emissions reductions by 2050.



Time for a Poll

How much of a focus are scope 1 & 2 reductions in your company's current ESG strategy?

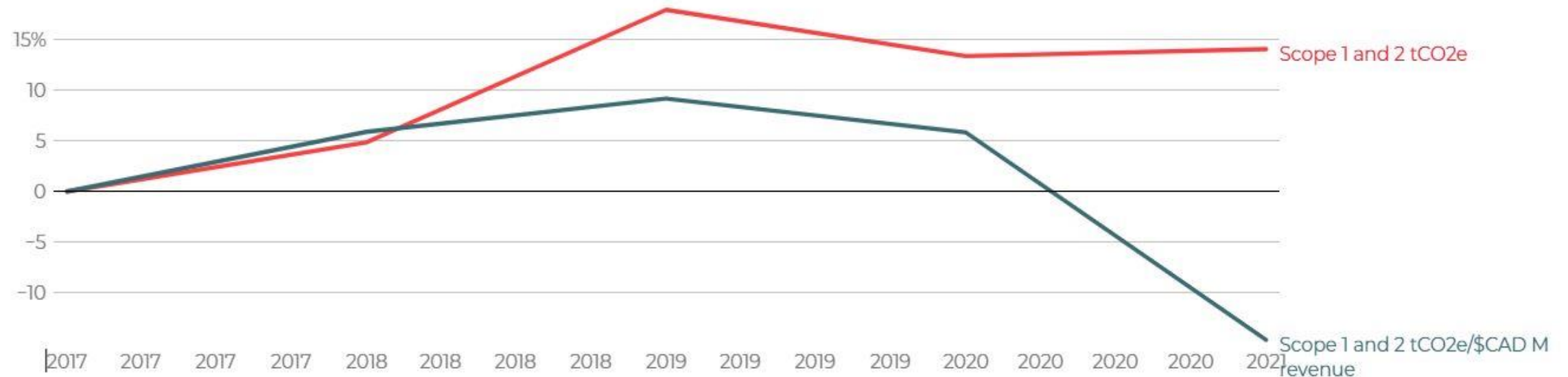
- 1) They are our top priority.
- 2) We have a portion of our focus on scope 1 & 2, and some on scope 3.
- 3) We are mostly focused on scope 3.
- 4) We don't have a clear strategy yet.



Context-setting: Canada's Emissions Continue to Rise

Figure 2: While Canada's biggest companies have become more efficient over the past five years, their total emissions continue to rise.

Per cent change relative to a 2017 baseline

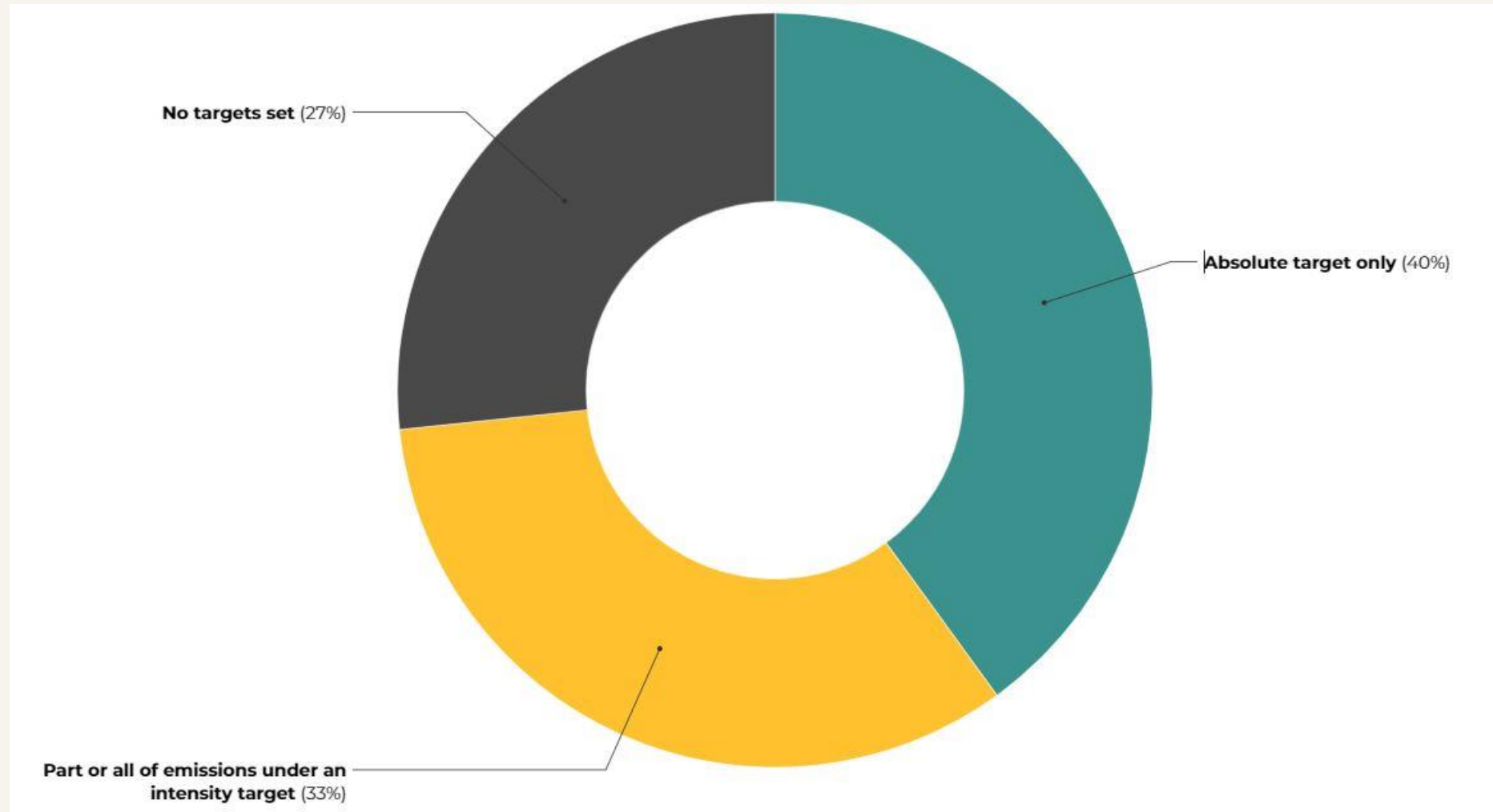


Source: Sources: Historical data based on publicly available data of 31 companies from the TSX60 Index. Companies were selected based on the availability of all revenue and GHG emissions data between the periods



Context-setting: Absolute and Intensity Targets

A third of top Canadian companies have only set intensity targets to cover a part or all their emissions.



A blurred background image showing a group of people in a meeting or conference. Several hands are raised in the air, suggesting an interactive session or a poll. The image is out of focus, with the foreground showing the backs of people's heads and shoulders.

Time for a Poll

Has your organization set a public target?

- 1) Yes, we have set an **absolute** target.
- 2) Yes, we have set an **intensity** target.
- 3) Yes, we have both
- 4) No, we have not set any targets.

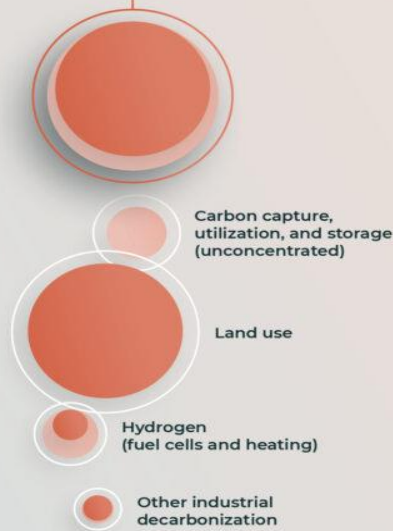
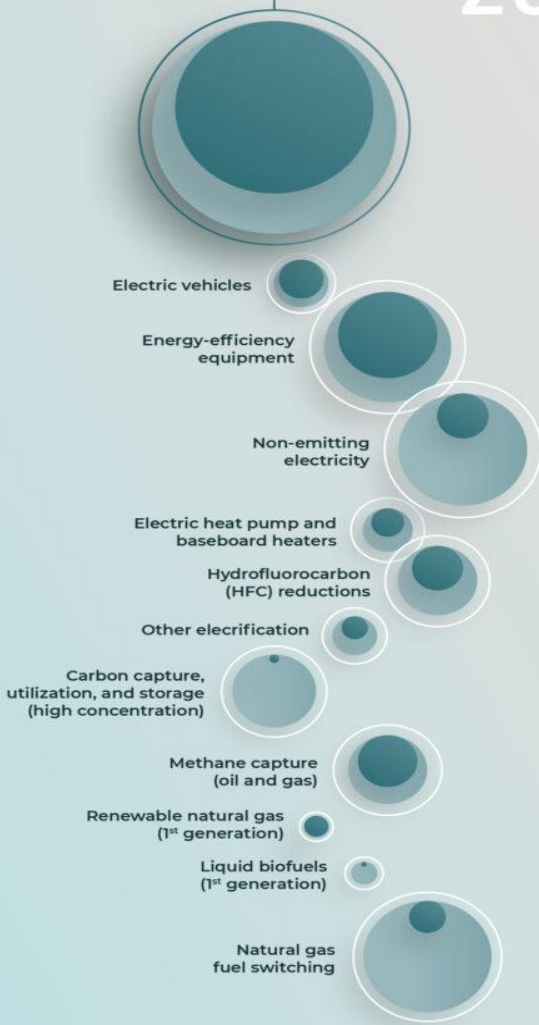


Safe Bets & Mitigation Hierarchy

SAFE BETS

2030

WILD CARDS



Across all the scenarios we examine, **safe bets** are expected to generate most of the reductions by 2030. **Wild cards** will not be sufficiently developed by then to play more than a supporting role.

By 2050, the contribution of emissions reductions from **safe bets** is more variable, as **wild cards** start to play a bigger part.

Safe bets: Emission-reducing technologies and solutions that are already commercially available and face no major constraints to widespread implementation.

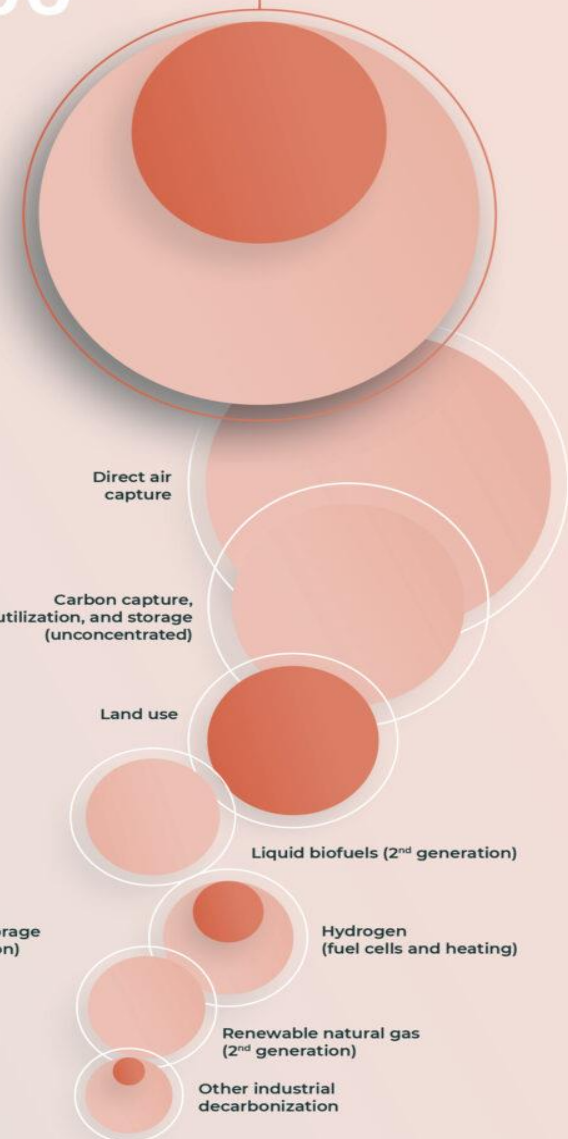
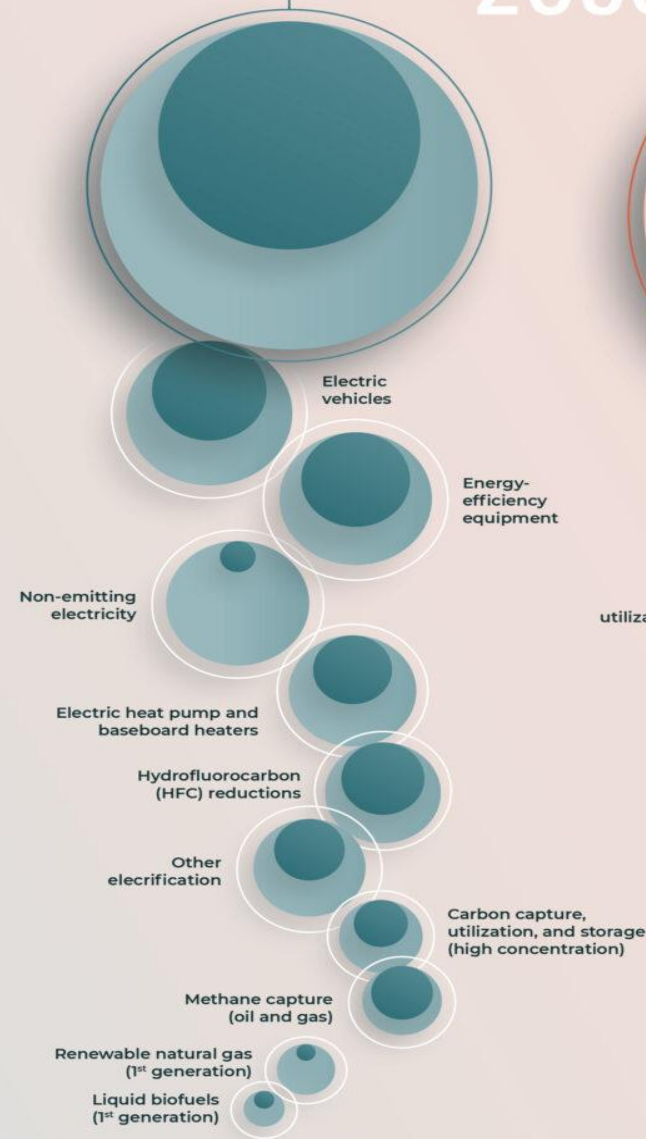
Wild cards: Solutions that may come to play a significant and important role on the path to net zero, but whose ultimate prospects remain uncertain.



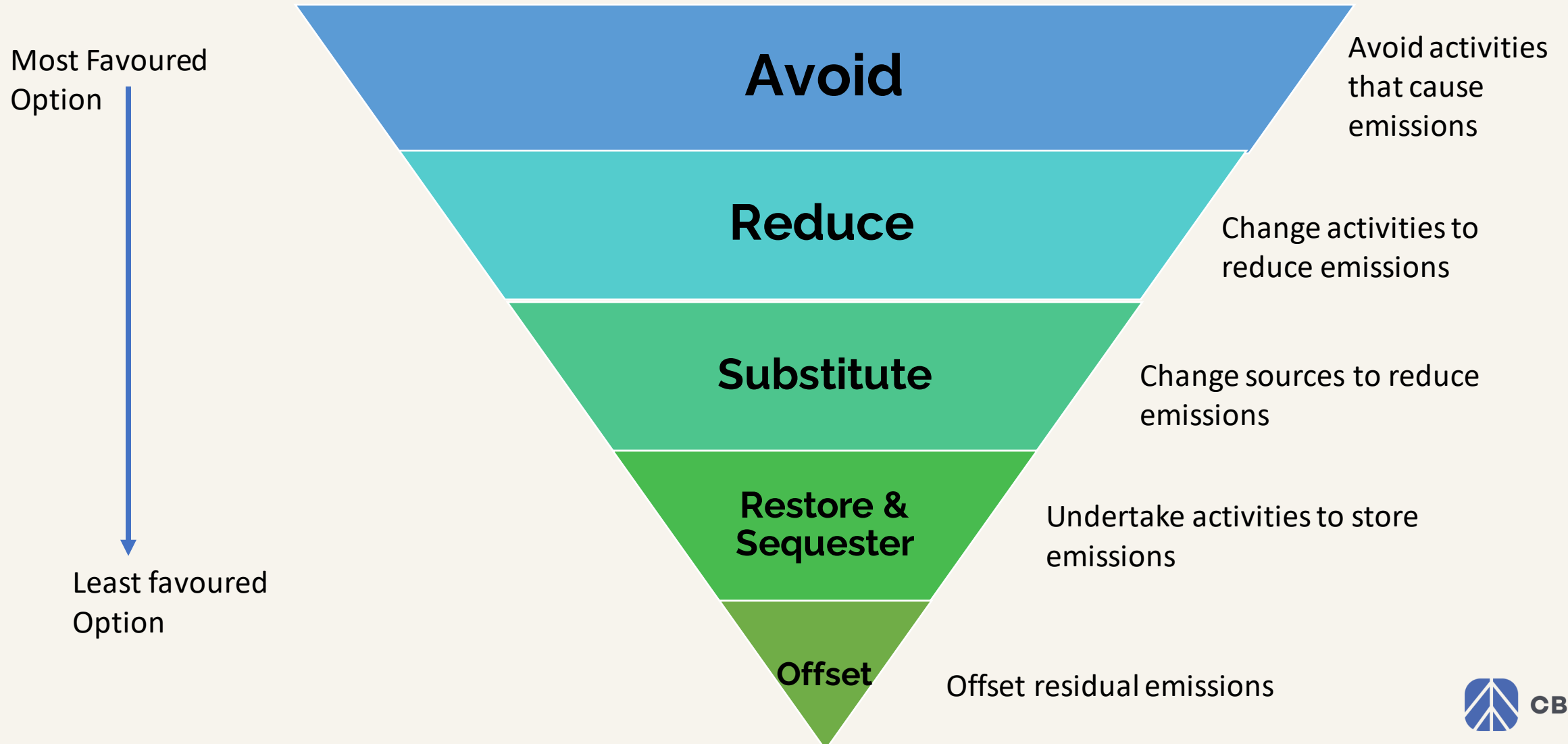
SAFE BETS

2050

WILD CARDS



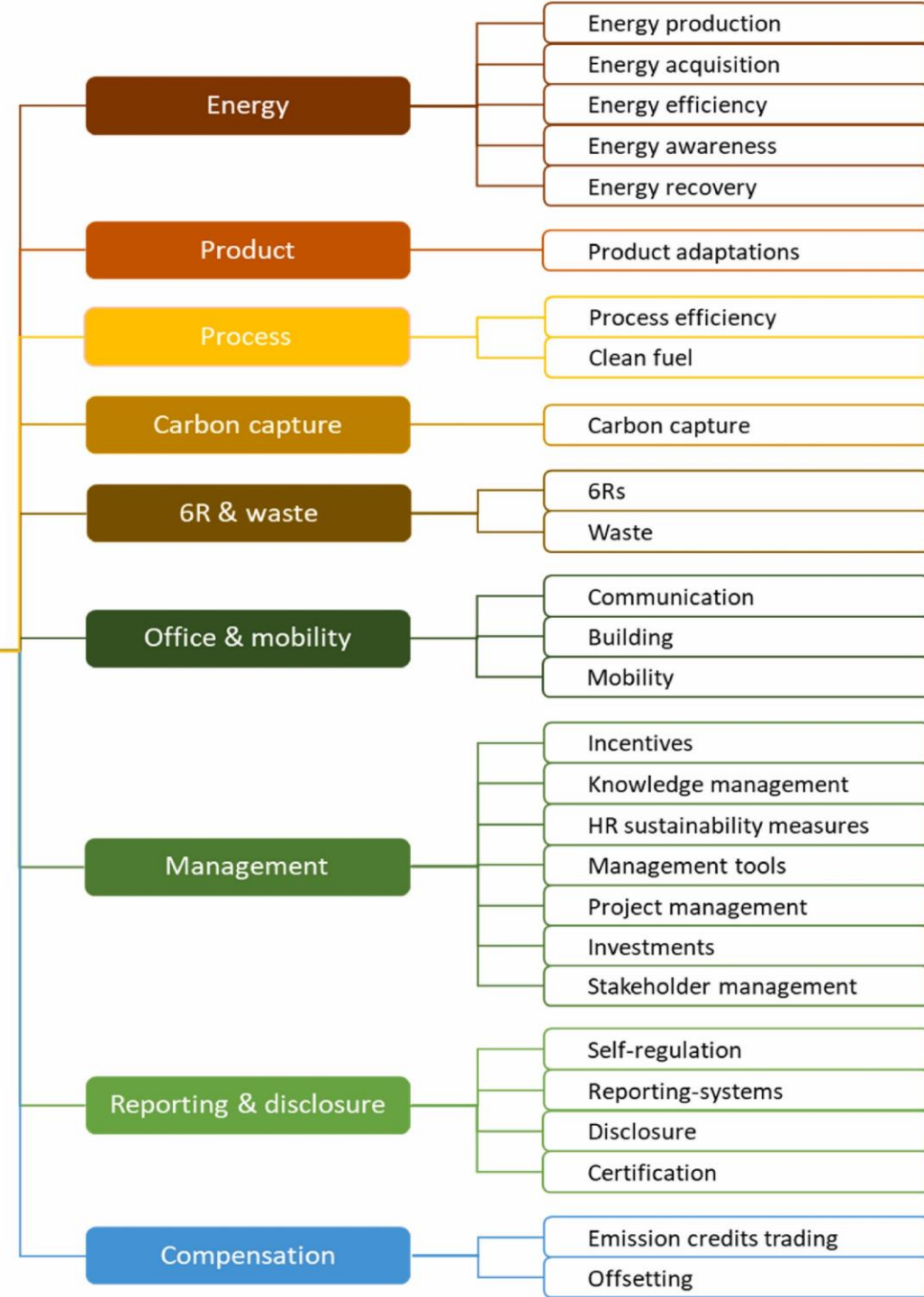
GHG Mitigation Hierarchy



Taxonym of GHG Emission Reduction Measures (ERM)

- A synthesis of different measures that companies can implement to reduce their GHG emissions
- The analysis is based on their ERM effectiveness at reducing the corporate carbon footprint relative to each other
- Based on a study of 141 companies in the manufacturing and services sector

GHG emission reduction





GHG Emission Reduction Measures

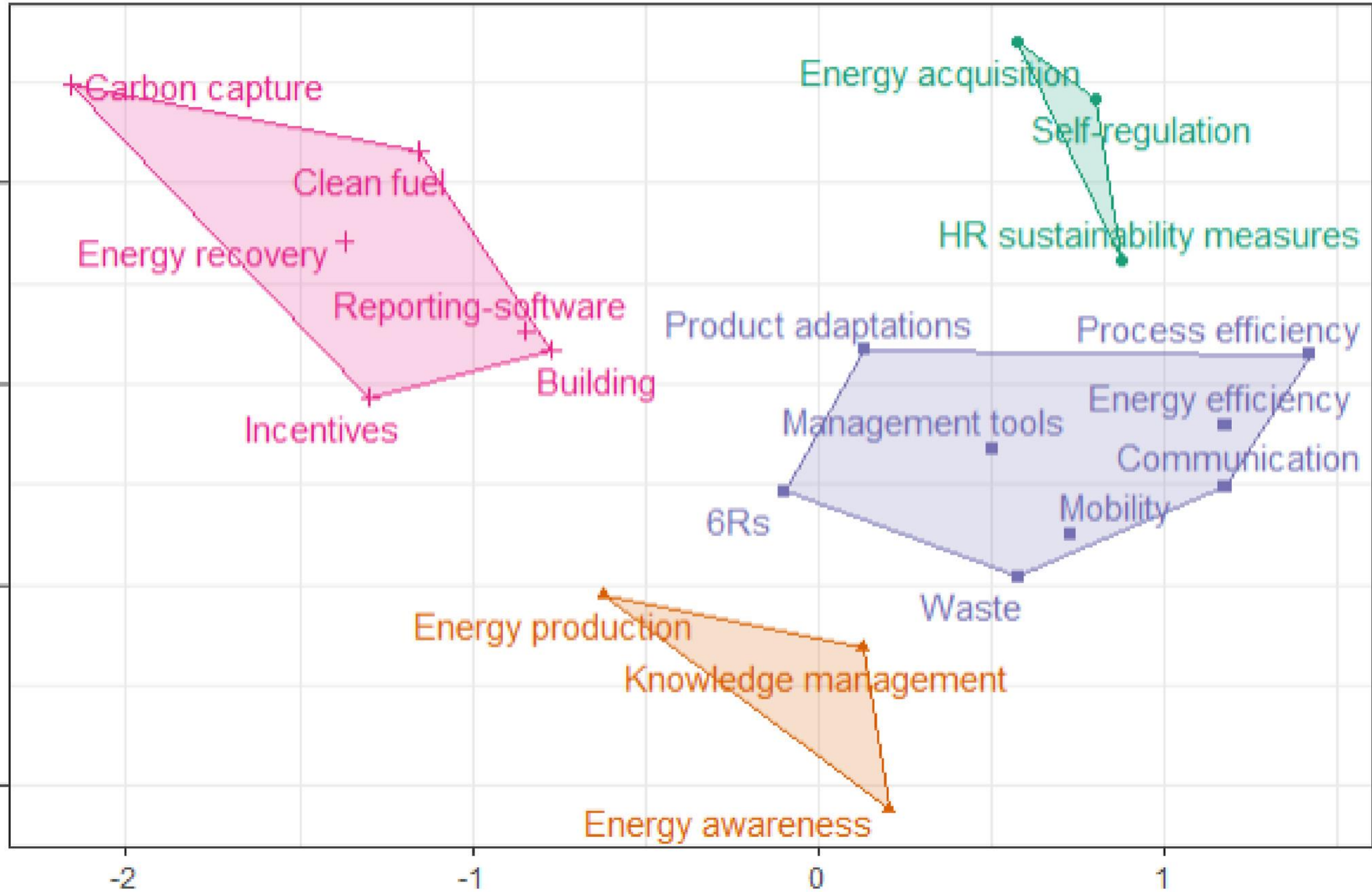
Top 5 Frequently Applied Measures

Rank	Category	Measures
1	Process	Process efficiency: Increase efficiency through process redesign, new equipment, or use of byproducts
2	Energy	Energy efficiency: Increase energy efficiency of energy production and technology (e.g., equipment)
3	Office & Mobility	Communication: Usage of less carbon-intensive communication
4	Management	HR sustainability measures: Incorporation of sustainability within the organizational structure
5	Reporting & Disclosure	Self-regulation: Join sustainable organizations, set targets, measure your results, and communicate them

Top 5 Ranked Effective Measures

Rank	Category	Measures
1	Energy	Energy acquisition: Use energy from renewable, clean, or low carbon sources
2	Carbon Capture	Carbon capture: Technology-based and natural capturing of GHG gases
3	Reporting & Disclosure	Self-regulation: Join sustainable organizations, set targets, measure your results, and communicate them
4	Process	Clean fuel: Use or development of cleaner fuels
5	Energy	Energy recovery: Use of heat pumps, waste heat recovery, or IGCC

Dim1: z displaying the effectiveness of measures





Breakout Discussion

15 minutes

- What emission reduction measures (ERM) has your organization implemented and what was the outcome?
- What is one ERM your organization could leverage in the next 2-3 years to address scope 1 and 2 emissions?



 **Member Spotlight**



France Rochette

*Director of Sales,
Sustainability Services*





Bullfrog Power

Sustainability solutions overview

France Rochette
Director of Sales
April 2024



Our renewable energy solutions



Renewable Energy Certificates (RECs)



Green Electricity (MWh)

- Ecologo® & Green-e® certified
- Wind, solar & low-impact hydro
- Addresses Scope 2
- Strong chain of custody
- Regionality
- Additionality
- Fully audited



Green Gas (GJ)

- Thermal certificate
- Biomethane captured from landfill waste
- Addresses Scope 1
- Avoids fossil gas extraction



Offsets

- Traded as tonnes of tCO₂
- Credits are ICROA accredited
- Addresses Scope 3 or transportation emissions



On-site

- Wind or solar
- Multi-year offtake agreements
- With/without storage

vPPA

- Projects in Alberta
- Flexibility of MWh/yr volume
- Multi-year offtake agreements
- Hedging as a service

RNG

- Southern Ontario Facility
- COD 2025
- Multi-year offtake agreements



All of Bullfrog Power's green energy products are audited annually by Deloitte to ensure renewable energy was produced, accurately counted, and credited to our customers.



We bring new renewable facilities to life

We work directly with developers to turn our customers' green energy demand into new wind and solar facilities. These successes belong to our entire community!



BluEarth Renewables' Burdett Solar Facility, est. 2021



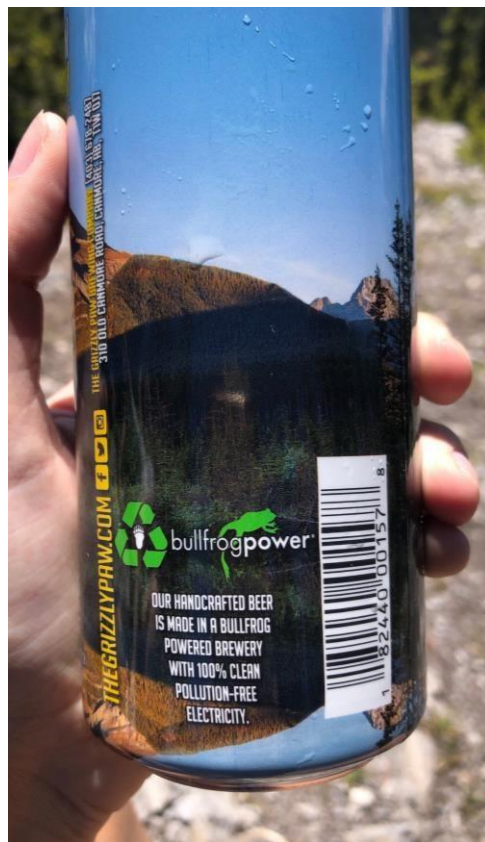
Rattlesnake Ridge Wind Farm, est. 2022



What Bullfrog Power can do for you



Reduce your environmental impact



Elevate your brand



Better connect with your community



Simplify your sustainability journey



Pros and cons of renewable energy solutions

Solution	Description	Pros	Cons
Market Instruments	<ul style="list-style-type: none"> • Renewable energy certificates or RECs for Scope 2 • Bullfrog Power green electricity • Renewable Thermal Certificates or RTCs • Bullfrog Power green natural gas 	<ul style="list-style-type: none"> • Low risk, pay as you go, approx. 20% upcharge to your targeted energy consumption. • Can act as internal cost of decarbonization to justify projects. • Additionality and regionality contribute positive impact to the grid. 	<ul style="list-style-type: none"> • Not a permanent reduction, requires on going expense until the grid has been fully decarbonized. • Impacts only market-based reporting.
On site PPA	On-site financed project with multi-year offtake agreement.	<ul style="list-style-type: none"> • Good additionality and impact on location-based reporting. • On-site generation can help internalize awareness of conservation. 	<ul style="list-style-type: none"> • Usually not capital effective, resulting in increased cost of energy. • Not all buildings are conducive to this approach. • Can be complicated when space is leased.



Pros and cons of renewable energy solutions

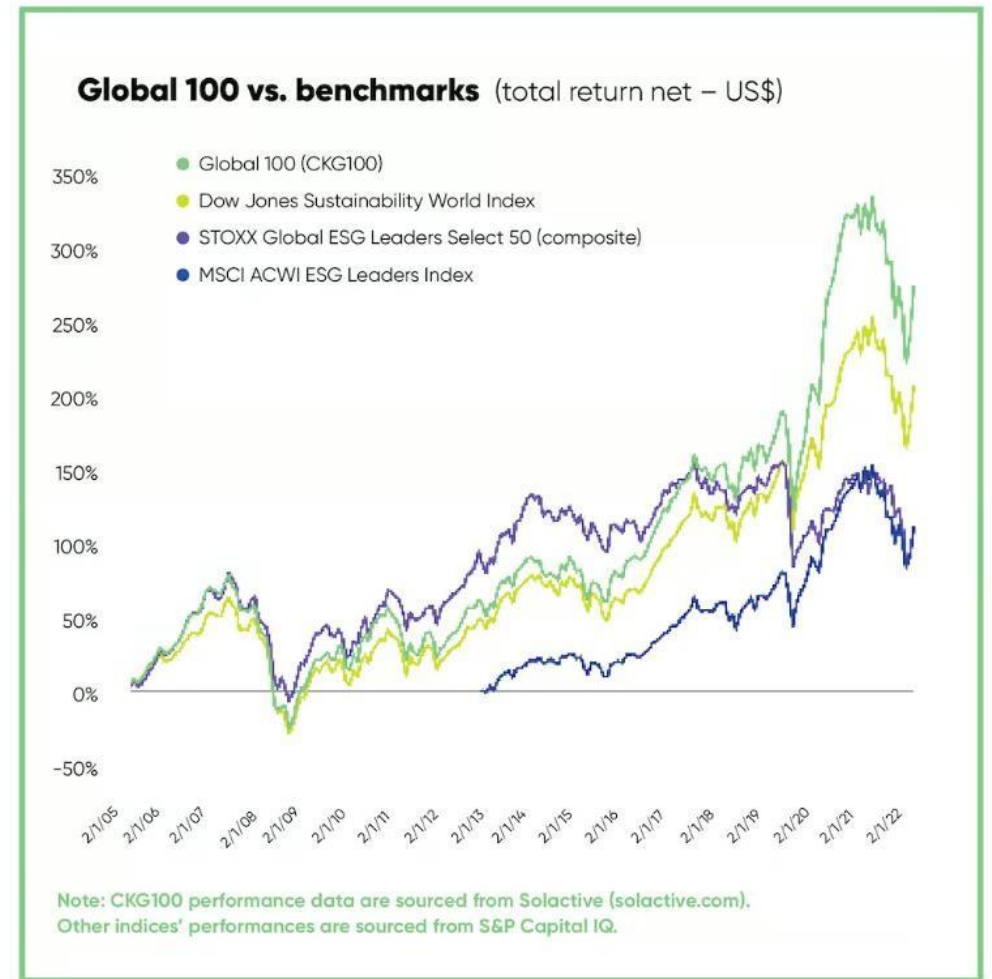
Solution	Description	Pros	Cons
VPPA	Off site utility scale project where the offtaker has exposure to commodity price and environmental attributes	<ul style="list-style-type: none"> • Large volume grid additionality • High visibility • Compelling storytelling, particularly if you are a large power consumer 	<ul style="list-style-type: none"> • Requires a long-term commitment • Exposure to commodity has high risk • Complex and limited regulatory framework
Forward Purchase agreement	Advance purchase of RECs for a given time and volume	<ul style="list-style-type: none"> • Stable pricing for RECs for agreed upon period • Identify with specific project • Demonstrates on-going commitment 	<ul style="list-style-type: none"> • Requires multi-year commitment
Offsets	Traded on the basis of tCO2e for Scope 3 emissions	<ul style="list-style-type: none"> • Provides a solution for hard to abate emissions such as travel, transportation and other Scope 3 	<ul style="list-style-type: none"> • Considered beyond Value Chain by SBTi • Requires quality to sourcing to avoid greenwashing risk



The business case for Renewable Energy

Why do companies use renewable energy?

- Lead by example
- Priced-in carbon risk for your investors, ensuring long term profitability
- Establishes an internal cost of carbon for project justification
- Strengthens your Brand
- Critical to attract young consumers to your Brand
- Makes your company a desirable supply chain partner
- Makes credible progress towards your decarbonization goals
- Influences your stakeholders to contribute to the energy transition



Source: Corporate Knights Global 100 2023 Report



Accredited or audited by industry leaders:



Audited annually by



Endorsed by trusted environmental NGOs:

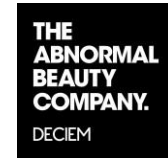


“Using only habitat-friendly renewable energy is vital to combating climate change so that nature, wildlife and people can thrive together. Bullfrog Power is an important part of that fight, and World Wildlife Fund Canada is proud to be bullfrogpowered.”

Megan Leslie
President and CEO, WWF-Canada



We help ambitious brands meet their sustainability goals



Staples Engagement



Goal: Educate employees and customers on Staples' green energy commitment

- In-store launch celebrations including customer activations
- Exhibits at Staples Annual General Meetings, reaching 300+ store managers
- Training modules for retail employees at all stores, reaching 300+ locations, 6000+ employees
- Spotlighted in national publication ads and sponsored content articles
- Staples corporate office events and educational sessions, reaching 500+ employees



Staples has been a Bullfrog Power customer since 2013 and avoided over 24K tonnes of CO₂e of Scope 2

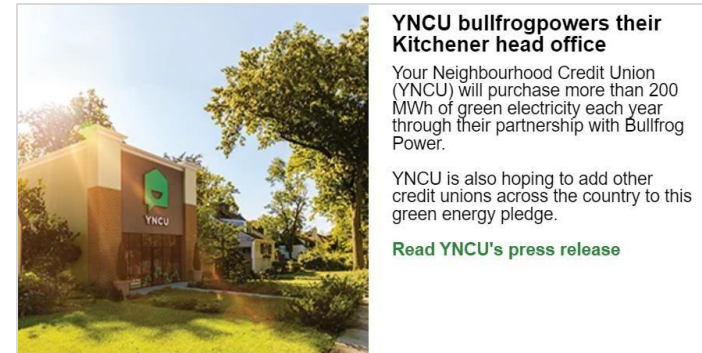


YNCU Launch



Goal: Promote to members and key stakeholders that YNCU is bullfrogpowered

- Joint press release developed and distributed to key media
- B Corp Spotlight story promoted on Bullfrog Power channels and shared to YNCU community



YNCU has been a Bullfrog Power customer since 2023 and on track to avoid 15.6 tonnes of CO₂e of Scope 2 emissions by the end of this year





Bullfrog Power ran a booth at PortsToronto's Billy Bishop Airport during Doors Open Toronto. Staff engaged 200+ visitors with prizes, photo opportunities, and educational displays.

Bullfrog also offered green energy discounts to PortsToronto's community.



Bullfrog also prepared custom animated signage to showcase the airport's environmental achievements.

"PortsToronto's partnership with Bullfrog Power has kept Scope 2 emissions for Billy Bishop Toronto City Airport, the marine Port of Toronto and the Outer Harbour Marina at zero for more than a decade. We are proud to be among the largest green energy purchasers in the country and part of a growing movement to help Canada transition to a low-carbon energy grid."

- Bojan Drakul, Director Infrastructure, Planning & Environment

Stakeholder engagement

Bullfrog can help educate and inspire your staff or customers with in-person or virtual event support.



Supporting community-led energy and cleantech projects

Social co-benefits



Solar panels on the Hope Blooms greenhouse improve food security and help disrupt poverty for Halifax youth

Innovative climate solutions



Earth Tech accelerates climate and water solutions, like solar panel recycling, optimized EV charging, and community water testing

Indigenous partnerships



A solar installation at the Haida Heritage Centre helps the Skidegate community move away from diesel and towards energy independence



What sustainability challenges are you facing?

- We know other companies are acting on climate change, but we don't know where to start.
- Without dedicated staff, it's hard to find the time to implement sustainability plans.
- We want to shrink our carbon footprint, but we don't have the in-house expertise to navigate different options and standards.
- We're not sure how sustainability stacks up against other business priorities, or what it can do for our brand.
- Other?



What will you do?



*“Yes, the planet got destroyed.
But for a beautiful moment in time we
created a lot of value for shareholders.”*

France Rochette

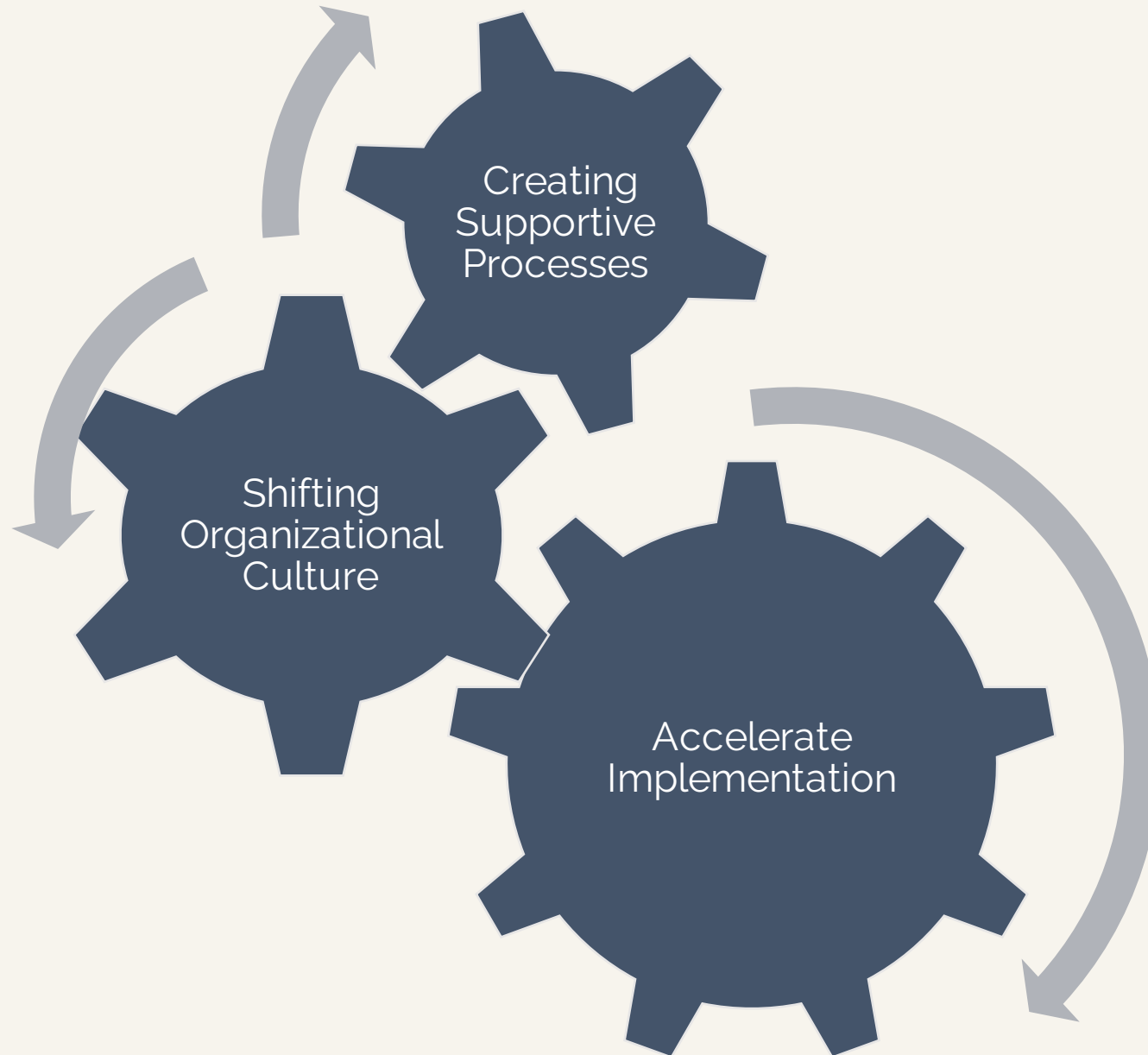
france.rochette@bullfrogpower.com





Internal Mechanisms to Accelerate Decarbonizing

● Internal Mechanisms: Areas of Influence



Internal Mechanisms: Shift Organizational Culture

- Embed climate considerations across internal governance, operations and company finances
- Adopt an internal price of carbon to assign climate cost across operations
- Employee engagement to source and implement emission reduction strategies
- Create management incentives
- Strengthen the alignment between your government relations team and the sustainability team



Breakout Discussion

10 minutes



- What internal mechanism is your organization considering?
- How might your team foster a culture that embeds climate considerations?





Internal Mechanisms: Create Supportive Processes

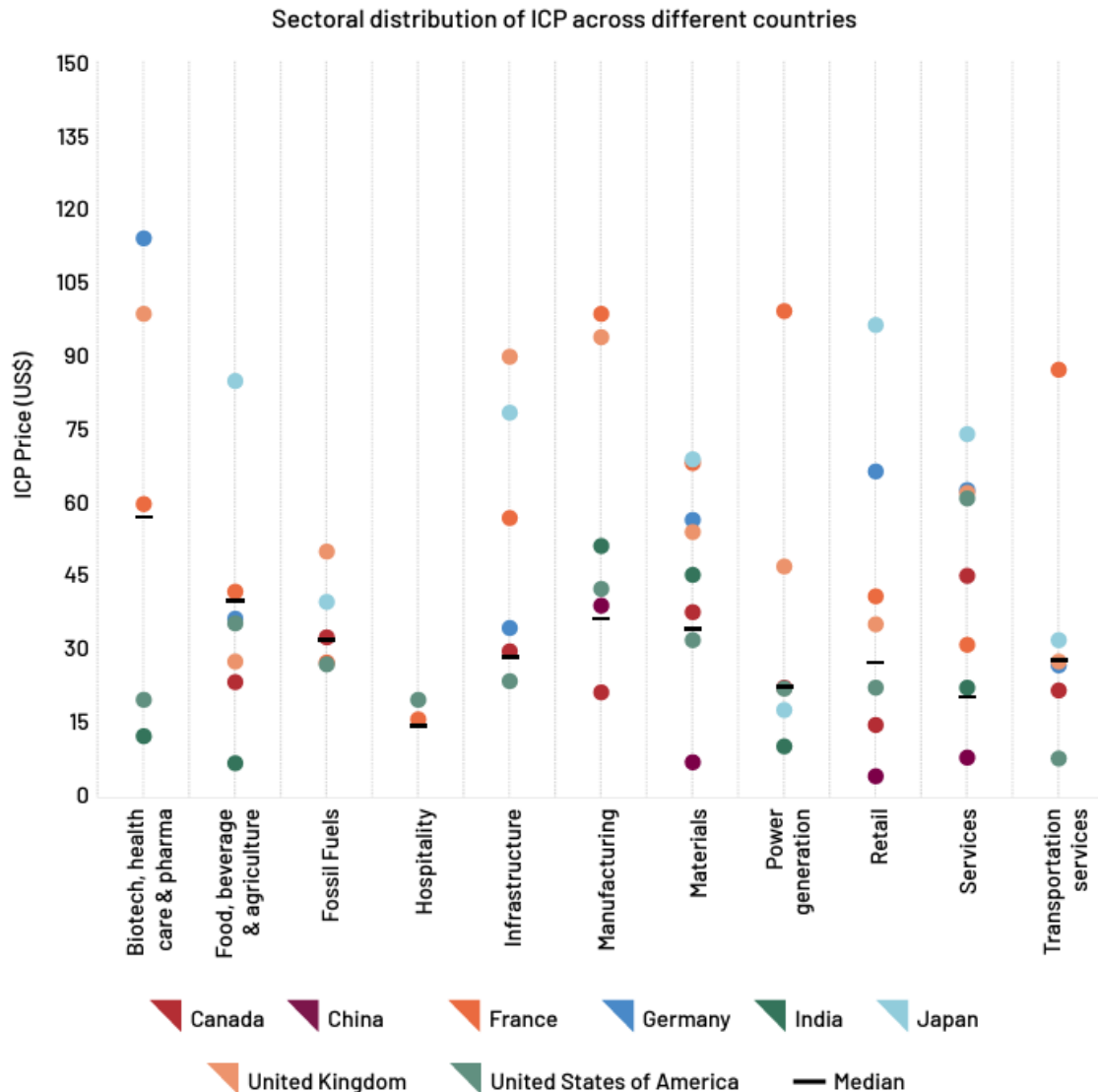
Setting an **internal price on carbon** can benefit your organization in many ways:

- Drive low-carbon investment
- Drive energy efficiency
- Changing internal behaviour
- Identifying and seizing low-carbon opportunities

The [price on carbon](#) varies widely depending on jurisdiction and sector ranging from \$15 USD to nearly \$120 USD per tonne.

There are different Internal Carbon Pricing models with varying levels of commitment.

- Shadow price
- Carbon fee
- Implicit price
- Internal trading



Internal Mechanisms: Enable Implementation

1. Collect and understand your emissions sources.

2. Co-Identify emission reduction solutions across the organization.

3. Determine the potential impact of each solution.

4. Build your business case.

Internal Mechanisms: Build a Business Case

Build your business case. The most successful business cases will be connected to these six components:

Risk

- Outline how your initiative mitigates or manages risk, and how it protects your organization.

Regulation

- Connect your initiative to existing or forthcoming regulations.

Revenue

- Identify how your initiative can retain customers and build strategic success.

Talent

- Describe how your initiative can attract, retain, motivate and develop talent.

OpEx and CapEx

- Identify how your initiative will save money and/or allocate money more efficiently.

Capital

- Outlined how your initiative will maintain and improve access and terms.

See "[Breaking Down the Bottom Line](#)", a business case for energy efficiency produced by city energy (a joint project of NRDC + IMT). This report provides an in-depth look as to why energy efficiency (and addressing scope 1 and 2 emissions) is so important for business from a financial, legal and social perspective.

Source: https://cdn.cdp.net/cdp-production/cms/reports/documents/000/007/259/original/bain_report_the_road_to_net_zero_starts_with_your_core_business.pdf?1691656234

Upcoming CBSR Initiatives – May

Software-as-a-Service (SaaS) Solutions Survey

- Circulated to all CBSR Members (EXCEL, Corporate and SME)
- Help members identify which Software-as-a-Service (SaaS) Solutions are the most helpful in the context of Corporate Sustainability.
- Results will be shared in the fall and shared with all Members.

Peer Coaching Circle

- Available to all CBSR Members but you will need to opt-in.
- CBSR will coordinate groups of 3-4 Members with similar goals, interests and levels of seniority.
- CBSR will set-up the initial meet-up on and the groups will self-organize thereafter.
- If you are interested, fill out the survey!

● Making the Most of your Membership

This video outlines the benefits you can use as a CBSR Member in 2024.



Access the video in the [Member Resource Portal](#) using passcode **Yahoo4CBSR**.

Thank You!



CBSR



Appendix

MEASURES	Implementation Example
Energy production: Generate renewable energy with PV and use energy storage (onsite)	Installation of solar panels and usage of energy storage on buildings or other onsite renewables (wind, biofuels)
Energy acquisition: Use energy from renewable, clean, or low carbon sources	<p>Purchase of renewable energy (e.g., wind, solar, (local) biomass, hydro)</p> <p>Purchase of energy from low carbon or carbon neutral sources (e.g., geothermal, nuclear, fuel cell, power plantbased carbon capture and storage)</p>
Energy efficiency: Increase efficiency of energy production and technology (e.g., equipment)	<p>Increase the efficiency of carbon-based power plants in the fossil fuel sector (e.g., by using gas instead of coal)</p> <p>Integrated gasification combined cycle (IGCC) using biogas (material for biogas: local agriculture, wood chip, seaweeds and poplars, landfill)</p> <p>Use of energy-efficient equipment and machinery (e.g., by energy-efficient air conditioning, motion detectors, efficient light adjustments/LEDs/motion sensor, smart metering)</p>
Energy awareness: Inform employees of energy-saving methods	Create energy awareness, knowledge, and commitment among the employees (e.g., energy-saving tip sheets, lights off, perform regular maintenance on units)
Energy recovery: Use heat pumps, waste heat recovery, or IGCC	Implementation of energy recovery processes (e.g., waste heat recovery from landfill, recycling of blast furnace gas, IGCC (Integrated gasification combined cycle))



Appendix

Product ERM	Implementation Example
Produce Adaptations: Redesign product to use renewable / recycled or less carbon intensive materials	<p>Redesign products or modify them to reduce their carbon footprint (e.g., by increasing the product longevity, or use of lighter weight material)</p> <p>Use recycled and/or renewable materials for products (biodegradable materials, e.g., mushrooms instead of leather)</p>
Process ERM	Implementation Example
Process efficiency: Increase efficiency through process redesign, new equipment, or use of byproducts	<p>Redesign the process to achieve better efficiency (reduction of process time e.g., by implementing automation or IoT devices)</p> <p>Regularly update the machinery (e.g., replacing lignite-fired boiler with natural-gas-fired boilers)</p> <p>Use, sell, or reduce the footprint of byproducts (e.g., selling of liquid carbon dioxide and calcium bicarbonate, or having oxygen as an output)</p>
Clean fuel: Use or development of cleaner fuels	<p>Improve the efficiency of fuel and fuel consumption (e.g., cars with less consumption) or use low carbon fuels (like fuel-cell, biomass/biofuels, (sewage) sludge as fuel, paint waste, industrial plastic, rubber residues, landfill gas, waste oil)</p>



Appendix

Carbon ERM	Implementation Example
Carbon capture: Technology-based and natural capture of GHG	Carbon capture and storage or sequestration technologies Residue management strategies (e.g., remove and collect straw from fields to use it for other purposes)
6 R & waste management category	Implementation Example
6Rs:Application of the 6Rs-principle throughout the organization	Recycling of brickwork from deconstructions
Waste:Reduction of waste and appropriate discharge	Install water recycling processes (e.g., greywater in the lavatory) Implement waste reduction policies (e.g., loss prevention) Adequate waste discharge (e.g., clean used water before it leaves your production line, look for recycle and reuse opportunities, use recycle bins at work)

Appendix

Office & Mobility Category	Implementation Example
Communication: Usage of less carbon-intensive communication	Reduce paper usage (e.g., double-sided and reduced printing)
Building: Improve Buildings through modernization and more efficient heating	Create more effective building insulation (walls, windows, roofs) Retrofit and renovate with "green products" (e.g., efficient, and low energy consumption heating and ventilation system) Installation and usage of heat pumps
Mobility: Change to less carbon-intensive travel modes	Reduce business travel (overall and distances, especially flights) Change the mode of transportation (e.g., taking the train instead of a plane or car) Use hybrid or electric cars and/or bicycles if applicable Foster eco-driving and car-sharing to reduce fuel consumption



Appendix

Management ERM	Implementation Example
Incentives: Incentives to foster low carbon behavior	Crate incentives (e.g., monetary rewards) for low carbon behavior
Knowledge management: Conduct workshops and information sharing	Information sharing of mitigation activities, raise awareness for internal and external stakeholders Involve employees in sustainability by conducting workshops and training for low carbon behaviors and actions
HR sustainability measures: Incorporation of sustainability within the organizational structure	Generation of green jobs (by hiring an environmental/sustainability manager) Create a corporate social responsibility (CSR) committee to lead your environmental changes Have diversification among your board members
Management tools: Use quality control tools, best practices, and scenario analysis and risk management to apply the reduction measures	Conduct a SWOT-analysis (risk management, recognize new markets through climate change effects) Create green portfolio management (decrease the share of products with a relatively high environmental impact in a company's product portfolio) Vulnerability assessment (systematic review of security weaknesses) Use scenario developments to identify carbon hotspots and the highest reduction impacts Identify industrial symbiosis options (e.g., can your waste be used for a biogas plant nearby?) Collect and apply best-practice examples and benchmark yourself against competitors
Project management: Adaption of project management to new regulations and technologies	Adapt project organization to new technologies and regulations (e.g., guarantees from suppliers for functionality for innovative technologies, including suppliers earlier in the planning phase for, e.g., solar panels or new water filtration systems)
Investments: Place investment decisions that support sustainability	Integrate targets for emissions into investment decisions for new projects Invest in R&D for sustainability (develop sustainable technologies and products)
Stakeholder management: Engage with policymakers	Engage with policymakers on possible responses to climate change including taxation, regulation, and carbon trading Public-private partnerships (PPPs) for energy-efficient investments

Appendix

Self Regulation ERM

Self-regulation: Join sustainable organizations, set targets, measure results, and communicate them

Participate in climate change business groups for information exchange

Commit to environmental management & emission reduction targets and make a detailed plan

Integrate climate change considerations into core decision-making, investment decisions, and corporate strategy

Measure your emissions precisely (e.g., according to GHG protocol scope 1–3) and communicate the results

Reporting-systems: Use software to improve overall efficiency

Apply smart energy monitoring or use an energy management system

Use a process control system (e.g., total productive maintenance (TPM))

Use an environmental management system (EMS) such as a GHG management system (e.g., ECO2MAN) or Water–Energy–Food Nexus (WEFN)

Disclosure: CDP, CSR, sustainability report, GRI, etc.

Computational fluid dynamics (CFD) for simulation purposes to optimize processes and production

Disclose your sustainability activities officially in a sustainability report, CDP, greenhouse gas emissions protocol, Global Reporting Initiative (GRI), Carbon Reduction Commitment, CSR - report, energy audit

Certification: Implementation and improvement of certificates and standards (e.g., ISO, EMAS)

Follow standards that help reduce emissions such as ISO 14001, 15001, 14040–14044, 14064–65, LEED, BREEAM, EMAS, PAS 2050, NATURA 2000, and other Ecolabels

Coordinate your sustainability activities, programs, and certificates to achieve a high impact