CBSR: EXCEL Partnership Net Zero Working Group – Evolving Role of Offsets

December 16th, 2021
1:30-3:00pm EST

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AGENDA

Timing (EST)	Agenda
1:30 – 1:40 PM	**Introductions and Virtual housekeeping**
1:40 – 1:55 PM	The Evolving Roll of Offsets
1:55 – 2:10 PM	**EXCEL Member Example** • Capital Power
2:15-2:55 PM	**Discussion:** • **Q1:** How is your organization factoring changes to offset eligibility and demand into your net zero strategies? • **Q2:** Are you more or less concerned about scrutiny towards your use of offsets today than in the past?
2:55 – 3:00 PM	**Next steps**

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VIRTUAL HOUSEKEEPING

Adjust your Zoom display name to show:
[Your Name, Company Name]

Encouraged to switch on video & participate!

Chatham House Rules
Take care of your needs

Tech questions? Ask them in the **CHAT**

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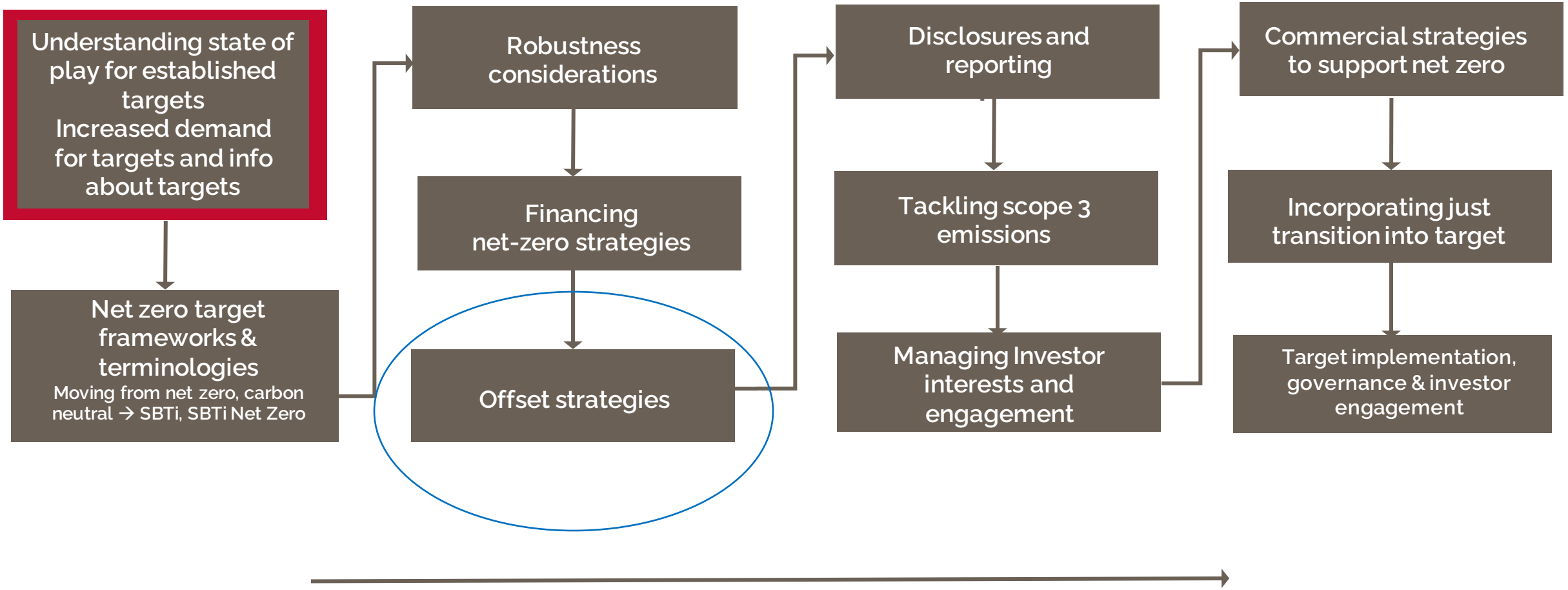
Working Group Continuum – Target Implementation



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Meet the CBSR EXCEL Net Zero Working Group

Offsets: OVERVIEW

Executive Summary	
The Ambition Gap	Further contributions to the net-zero equation are need in order for the world to avoid an above 2C warming scenario.
The Voluntary Offset Credit Market	The offset market is growing rapidly across multiple technologies and strategies, functioning as a means to help reach net-zero.
Reductions, Then Offsets	Reductions must take priority over offsets, as offsets alone cannot make up for current emissions outputs.
The Evolving Role of Offsets	The expansion of the offset market and growth in offset technology is putting greater impetus on offset use.
Climate System Feedbacks	Climate action urgency is accelerating, as natural capital is lost, increasing the need for immediate emissions abatement.
Offsets: US vs. Canada	Canada is ahead of the US on Carbon offsets both in terms of market demand but also regulatory frameworks.
Offsets: Canada	The decentralized approach of Canada's offset market has created jurisdictional nuances that need to be considered.
COP26 and Article 6	The article 6 outcomes from COP26 have created further support for international carbon offset markets.

LET'S BRAINSTORM

Discussion Question #1

How is your organization factoring changes to offset eligibility and demand into your net zero strategies?

Discussion Question #2

Are you more or less concerned about scrutiny towards your use of offsets today than in the past?

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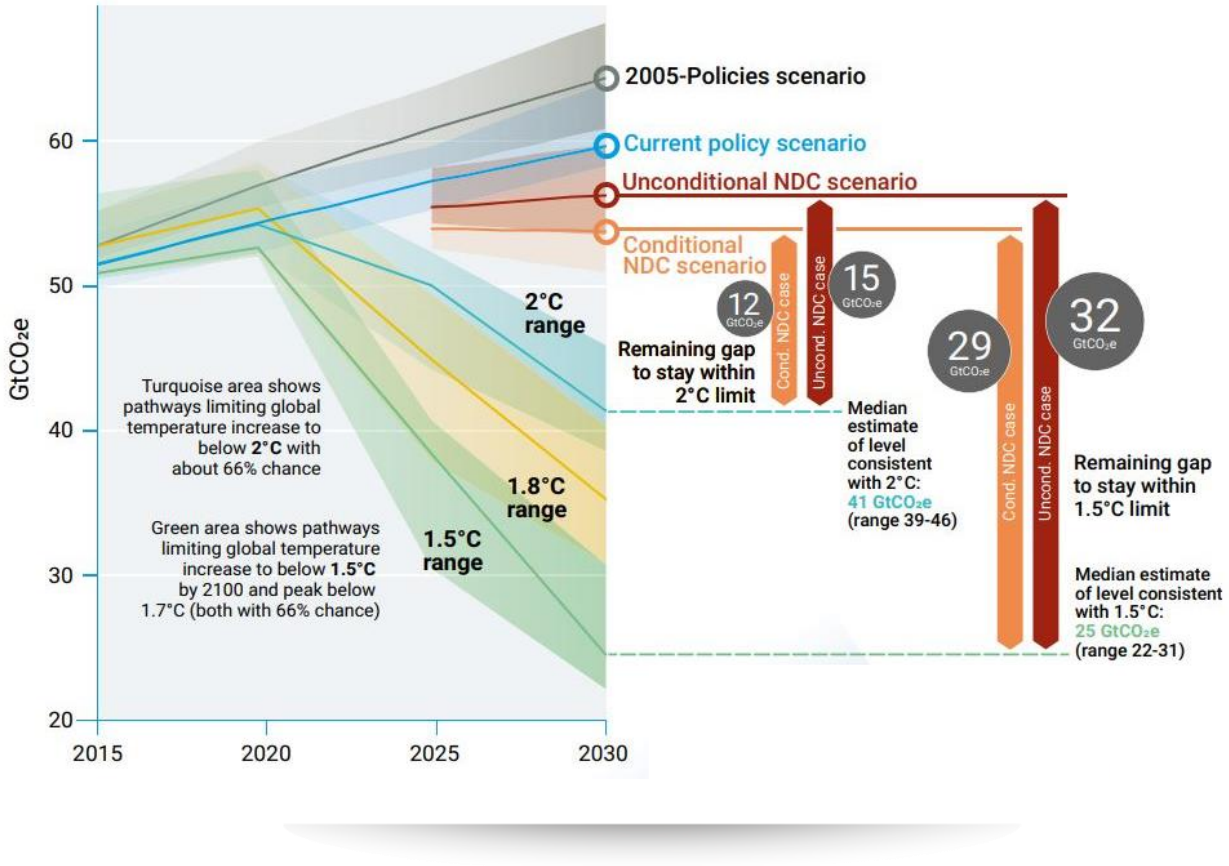
The Ambition Gap



There is a significant gap between national climate commitments and a 1.5°C warming target.

- The Paris Agreement led to national commitments (Nationally Determined Contributions) to reduce GhGs.
- The current policy scenarios lead to a warming exceeding both the 1.5°C and 2°C scenarios.
- Current ambitions by countries that are signatories to the Paris Agreement are not enough to avoid greater than 2°C in warming and associated risks.

Further contributions to the net-zero equation are need in order for the world to avoid an above 2C warming scenario.

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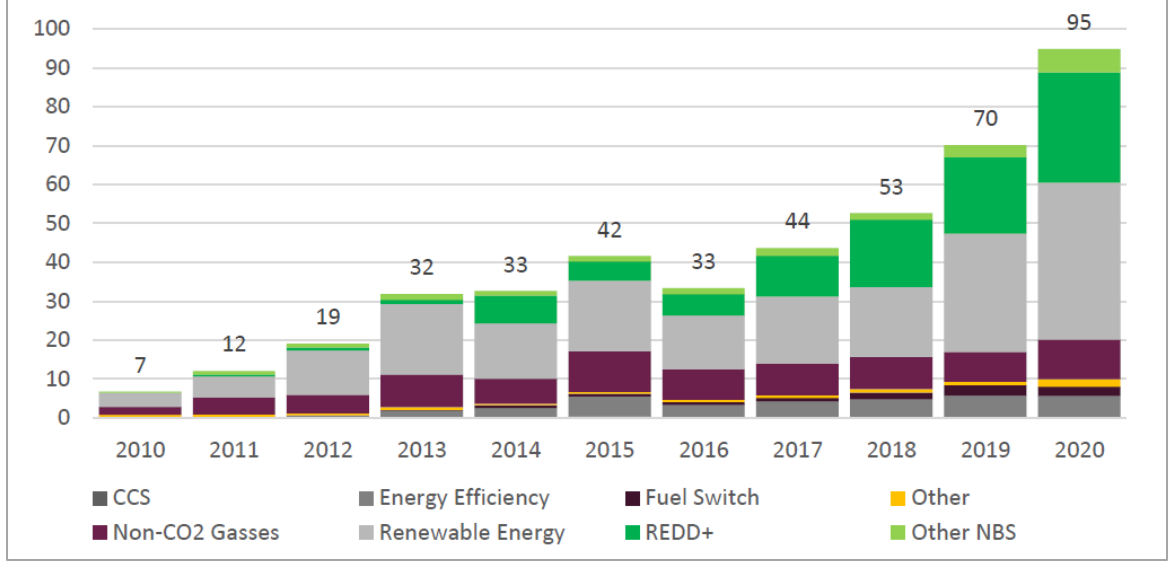
Voluntary Offset Credit Market Today

- Voluntary offset credits used to meet **internal goals:** emissions targets, climate leadership, corporate social responsibility, etc.
- The demand for carbon credits could increase by a factor of 15 or more by 2030 and by a factor of up to 100 by 2050. By 2030 the market for carbon credits could be worth upward of $50 billion.
- Credits are a mix of reductions and removals.
- Average **2020 price ~$5 USD/$tCO_2e$**
  - Low end $1 for lower quality, older projects
  - >$20 for projects with co-benefits
  - Low price driven by excess supply and lower integrity credits
- Prices historically "cost-based" pricing.
- Pricing influenced by accreditations/ verifications, project costs, co-benefits.

Figure 1. Demand for voluntarily carbon credits ($MtCO_2e$)



2020 demand = ~0.2% of global emissions

Source: https://trove-research.com/wp-content/uploads/2021/06/Trove-Research-Carbon-Credit-Demand-Supply-and-Prices-1-June-2021.pdf

The offset market is growing rapidly across multiple technologies and strategies, functioning as a means to help reach net-zero.

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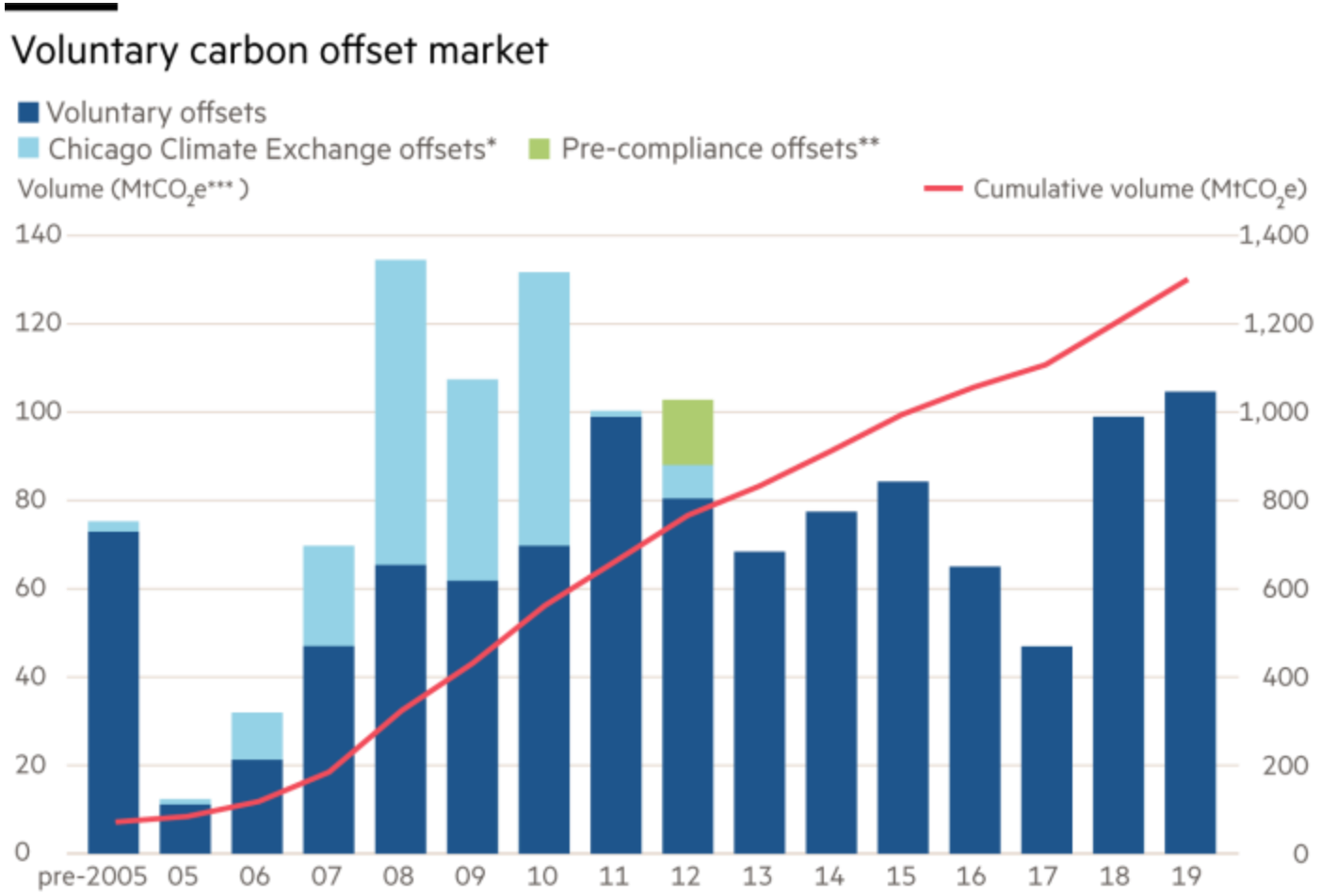
Reduction, first. Offsets, second.

The focus should first and foremost be on ***reducing*** generated carbon emissions.

- Organizations achieve these reductions through **a range of energy efficiency initiatives and emission-reducing technologies and processes** (e.g. fuel switching).
- Organizations should next **look to internal opportunities to sequester carbon** (e.g. nature-based solutions, carbon capture, utilization and storage).
- Any remaining emissions that cannot be eliminated can then be netted out by purchasing **carbon offsets.**



Reductions must take priority over offsets, as offsets alone cannot make up for current emissions outputs.

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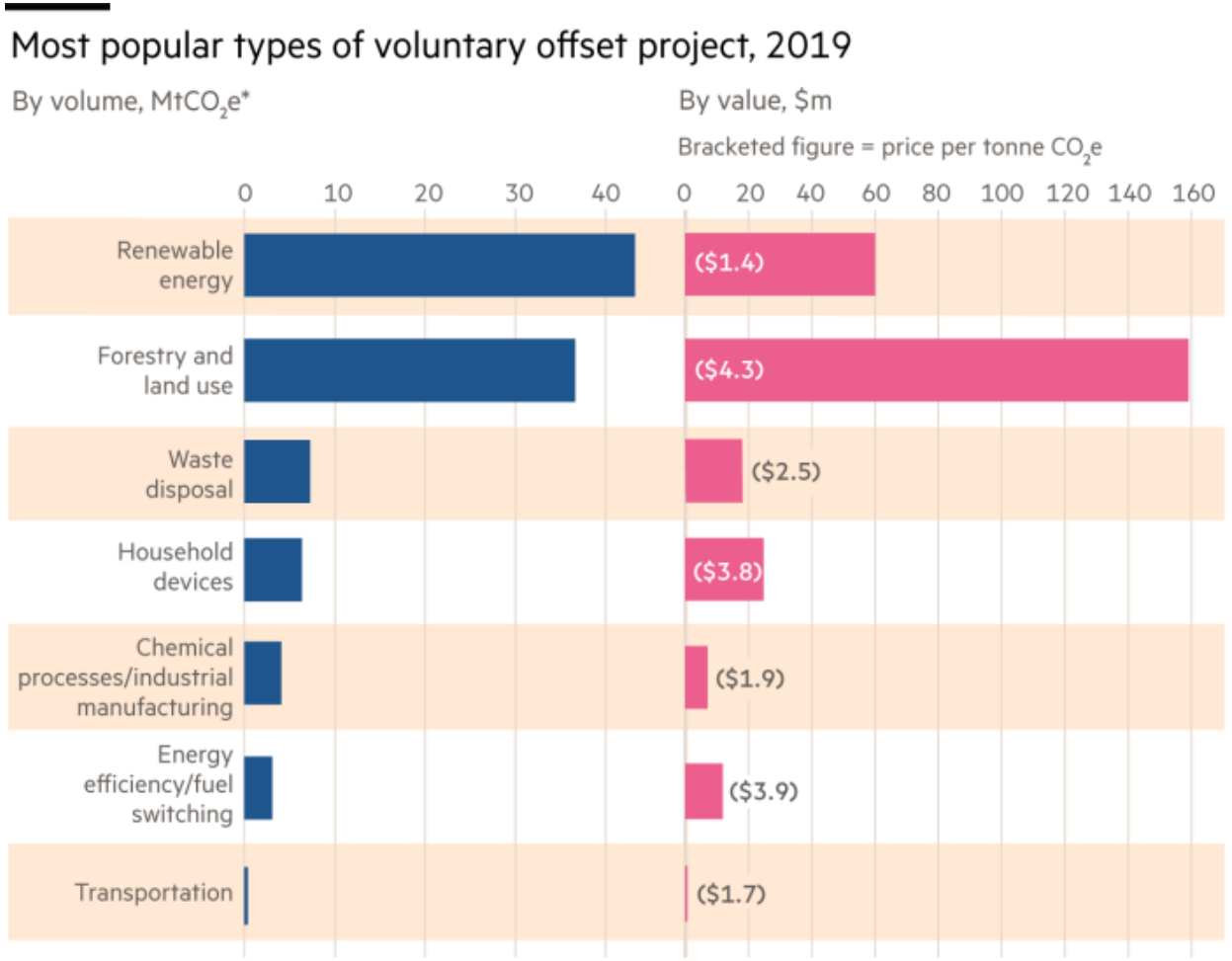
The Evolving Role of Offsets

- Offsets play an important role in addressing emissions that cannot be cut by any other means.
- Nature based solutions provide potentially important co-benefits for biodiversity.
- Demand in 2030 could be matched by the potential annual supply of carbon credits- 8 to 12 GtCO2 per year. These carbon credits would come from four categories:
  - avoided nature loss (including deforestation)
  - nature-based sequestration, such as reforestation
  - avoidance or reduction of emissions such as methane from landfills
  - technology-based removal of carbon dioxide from the atmosphere



The expansion of the offset market and growth in offset technology is putting greater impetus on offset use.

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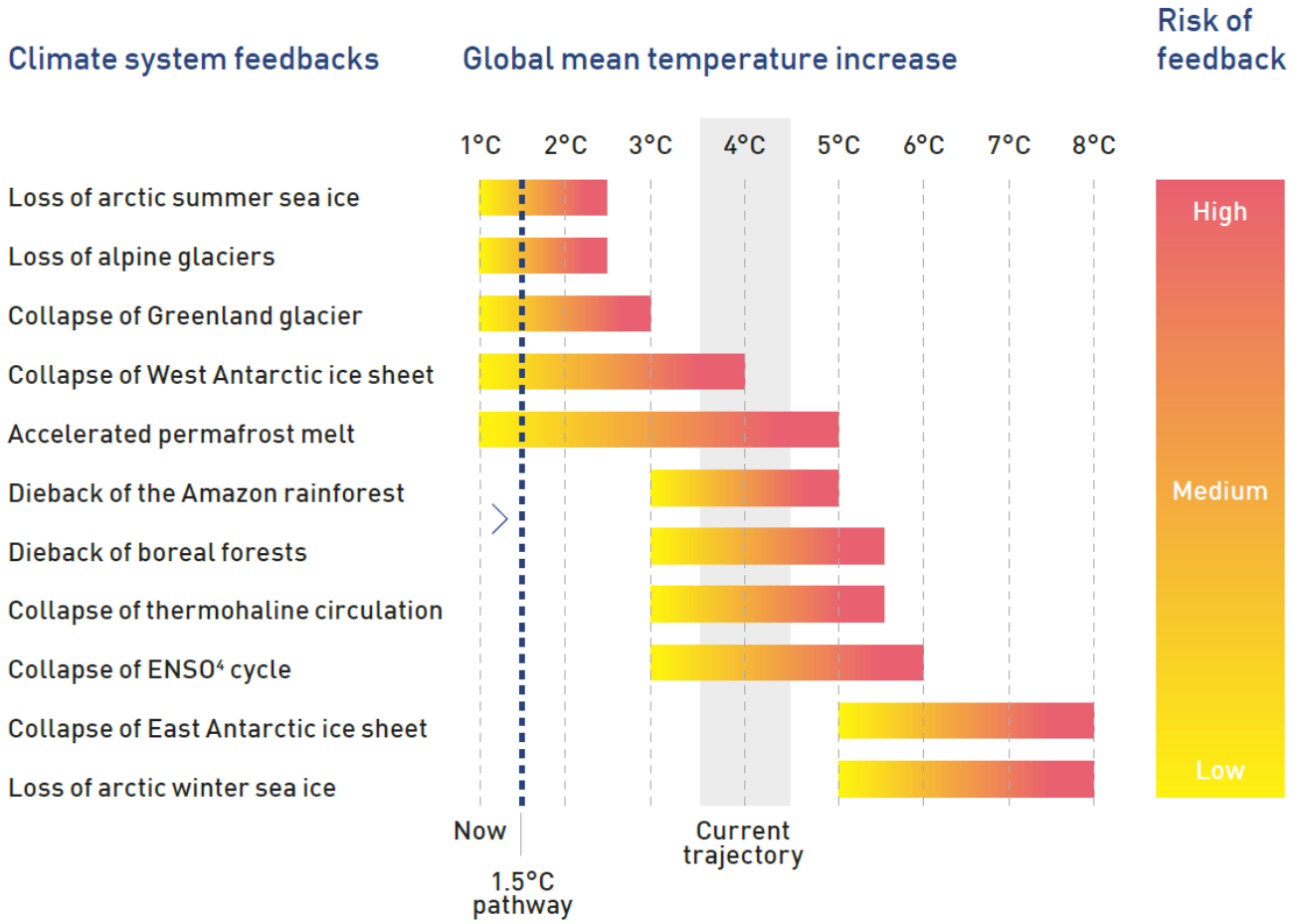
Increased Urgency – Climate System Feedbacks

- Positive climate feedbacks accelerate temperature increases and the impact of climate change.
- The natural capital that has traditionally been responsible for carbon removal accelerates climate change as it is lost.
- Lack of emissions reductions, and in some cases increases, compound this climate feedback.
- Powerful actors using carbon offsets to hide inaction.
- Offsetting will eventually need to involve permanent removal (few projects exist).



Climate action urgency is accelerating, as natural capital is lost, increasing the need for immediate emissions abatement.

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Offsets: US vs Canada

Canada

- Under Canada's backstop carbon pricing program for large emitters (OBPS), facilities must meet an output-based performance standard.
- Sectors and activities identified for new OBPS- oil and gas, mining, metal manufacturing, chemicals, food processing, wood products
- Emitters that do not meet their standard can use Federal Offset Credits, offsets from approved provincial offset systems, or pay an emissions charge to comply.
- The Federal Offset Credit system is currently under development; final regulations are anticipated Fall 2021. Then sold to regulated facilities.

United States

- There is currently no US federal regulatory system for offsets (either active or in development) as the US does not currently have a federal carbon price or cap and trade system.
- There are offset credits markets at the state level where individual states or groups of states have implemented carbon policies:
  - RGGI (Eastern), California, Washington.
- Decentralized system means varied regulations, processes, and allowances.
  - Difficult for companies with operations in multiple jurisdictions.

Canada is ahead of the US on Carbon offsets both in terms of market demand but also regulatory frameworks.

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Offsets: Canada

Canada

- Federal OBPS applies in Ontario (until 31st December 2021), Manitoba, Prince Edward Island, Yukon, Nunavut, and partially in Saskatchewan.
- Quebec, Nova Scotia, Newfoundland and Labrador, the Northwest Territories, New Brunswick and British Columbia have implemented their own carbon pollution pricing systems.
- Protocols currently under development include:
  - Advanced Refrigeration Systems; Improved Forest Management; Landfill Methane Management; and, Enhanced Soil Organic Carbon.
- Next up priorities for protocol development include:
  - Aerobic Composting, Afforestation/Reforestation, Livestock Feed Management and Avoided Conversion of Forests.

Canada's GHG commitments:

↓ 40-45% by 2030

Net-Zero by 2050

Carbon price:

2022: $50/tonne

2023 & beyond:

+ $15/t/year

By 2030: $170/t

The decentralized approach of Canada's offset market has created jurisdictional nuances that need to be considered.

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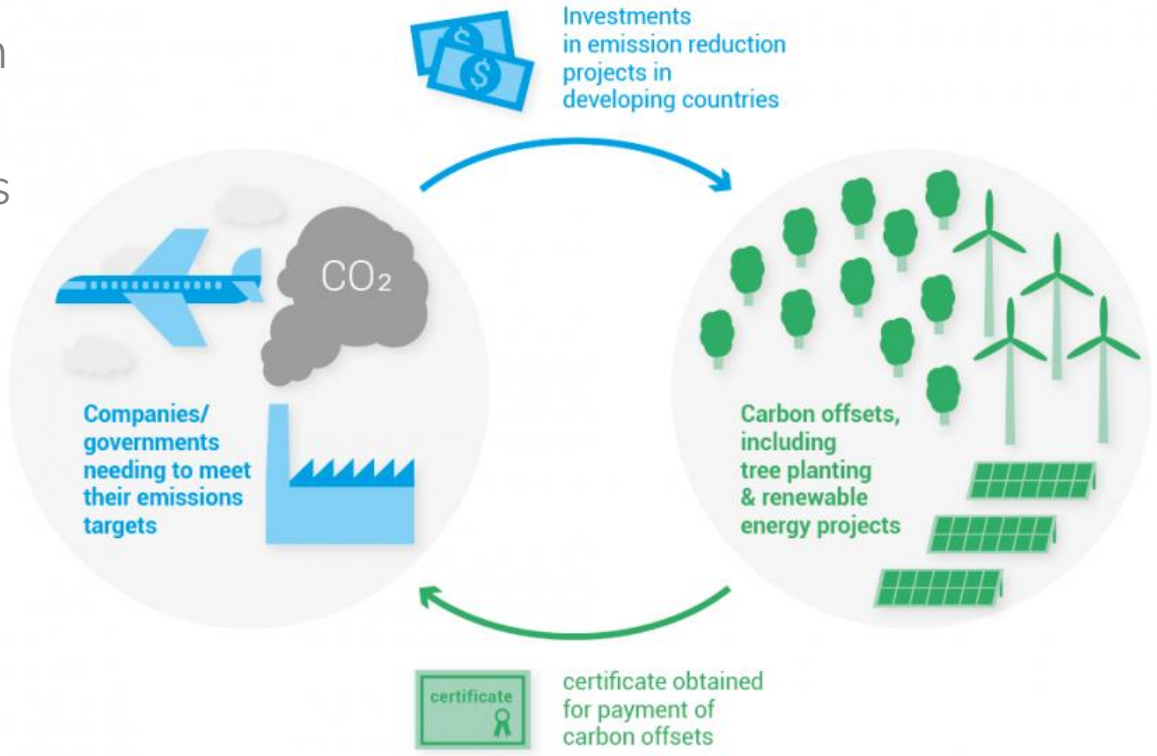
COP26 – Article 6

- Article 6 of the Paris Agreement provides a framework for countries to cooperate to reduce emissions using internationally traded mitigation outcomes (ITMOs), such as through **international carbon markets.**
- At COP26, parties approved decisions on three elements of Article 6: 6.2, 6.4, 6.8:
  - No double counting between countries.
  - 2013-2020 emissions reductions can apply to NDCs.
  - 5% rate on Share of Proceeds (SoP) of 5%; no fixed rate.
- The use of ITMOs must result in **additional emissions reductions**.
- The federal government is still considering whether and how it might use ITMOs to complement its domestic emission reduction efforts.



The article 6 outcomes from COP26 have created the beginning of internationally markets for carbon offset trading and sales.

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Offsets & Insets: SBTi

Offsets and Net Zero (esp. under SBTi NZ standard):

- Mitigation hierarchy is the fundamental principle
  - Reduce to >90% across whole value chain first, then worry about offsets
  - Focus on quality offsets within value chain (some say in-sets, but it gets kind of academic – focus on the spirit of the standard)
  - If options are limited to achieve net zero in value chain at a robust pace, then consider out of value chain offsets as a "beyond net zero" option but don't expect to get credit for these projects towards achieving net-zero targets
  - If you do have Forestry, Land and Agriculture (FLAG) emissions in your value chain, but also extractive/fossil emissions, expect to be able to offset w/FLAG projects for up to that portion of your value chain emissions that come from FLAG

Insets

- As opposed to carbon offsets where an organization pays for projects to capture atmospheric carbon dioxide somewhere else, carbon insets are when an organization invests in sustainable practices within its own supply chain. Carbon insets support the implementation of practices — often through agroforestry and tree-planting projects — that sequester carbon, promote climate resilience, protect biodiversity, and restore ecosystems.

Net Zero Working Group E-badge

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Thank you!

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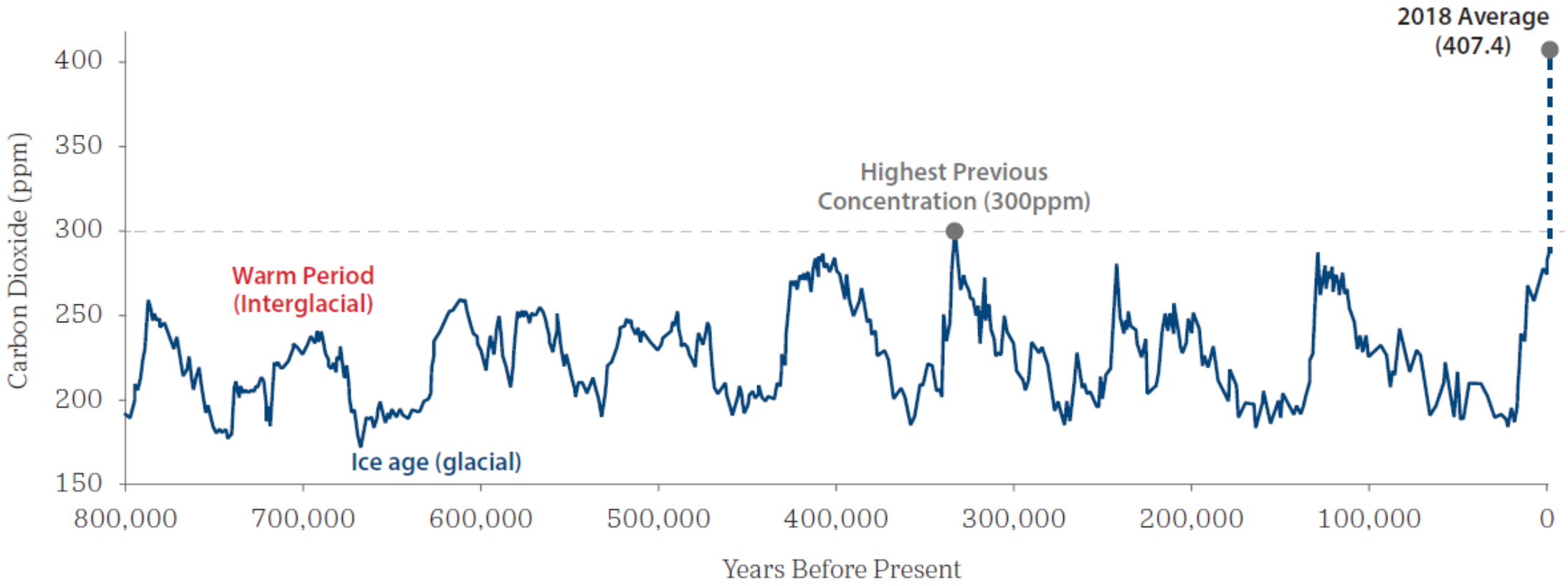
What's Driving Climate Change

The atmospheric concentration of CO_2 has been driven to unprecedented levels.



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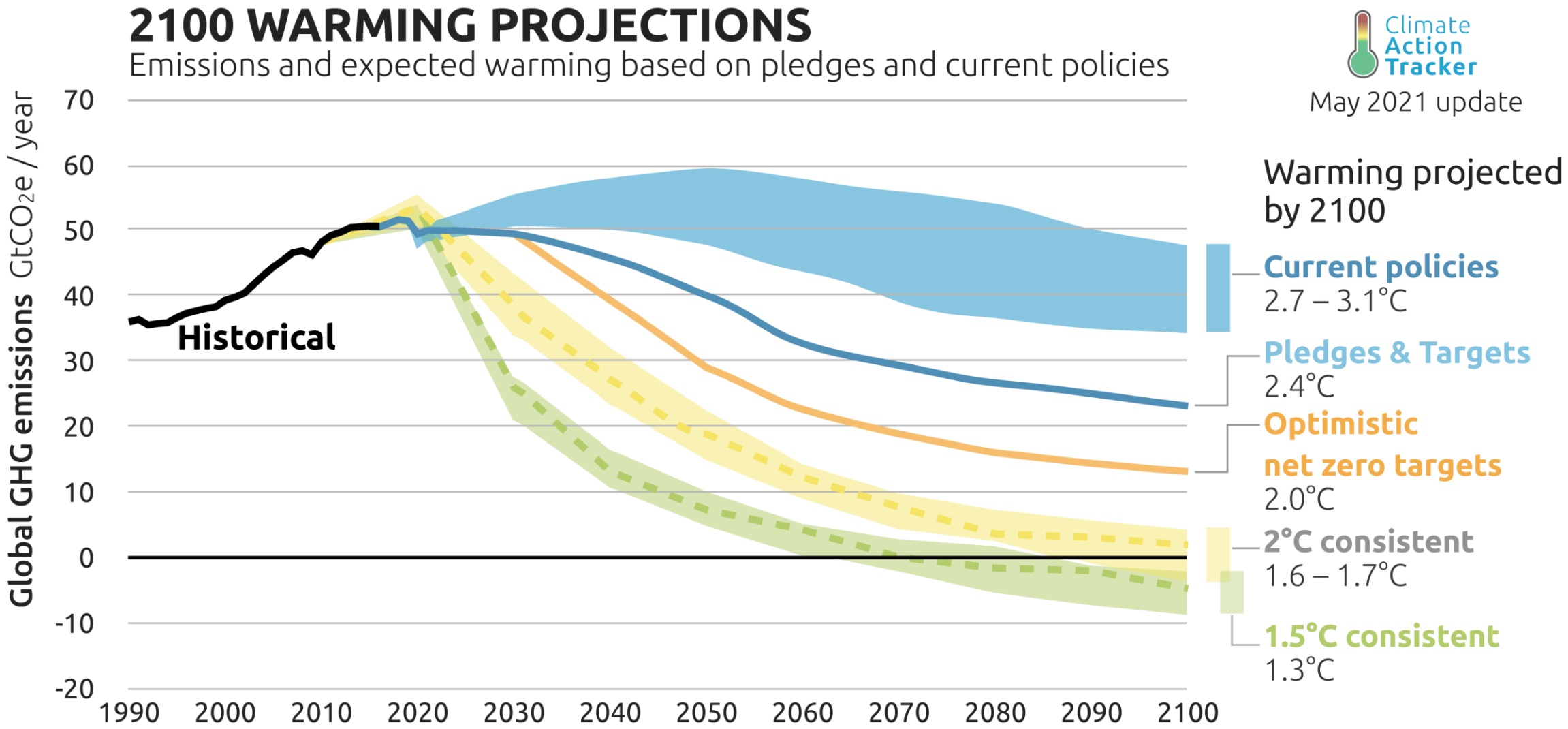
Net Zero Urgency – Current Trajectories



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Nature-Based Solutions

Definition: Nature-based Solutions protect, sustainably manage, and restore natural and modified ecosystems while addressing socio-environmental challenges.

Benefits

- Climate change mitigation
- Disaster risk reduction
- Food and water security
- Health
- Socially equitable economic development

Examples

- Improved forest management, reforestation, conservation
- Carbon forest offsets generated through programs such as the ***BC GHG Emission Offset System***

[INSERT KEY TAKEAWAY]

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BC GHG Emission Offset System

BC GHG Emission Offset Reduction Regulation

- NbS can be generated under the Forest Carbon offset protocols
- BC forest carbon offsets **focus on afforestation / reforestation, conservation, and improved forest management**
- Prices are variable and **current offset supply exceeds demand**

Voluntary Standards

- Under the internationally trusted Verified Credit Standard (VCS) generation of credits can be sold on voluntary markets.
- Prices can range from **<$1-$40 USD/tCO_2e** on the voluntary offset market

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How Does Carbon Offsetting Work?

1. Carbon credits are generated by projects that avoid, reduce or remove CO_2e from the atmosphere.

   ⓘ 1 metric ton of CO_2e = 1 carbon credit

2. Organizations offset their emissions by purchasing carbon credits.

Projects that generate carbon credits include:

Forest conservation

Carbon capture and storage

Renewable energy

Carbon offset projects require funding to be developed and often it can be difficult to source this capital.

Carbon Streaming Corporation (CSC) is able to provide this capital with its unique streaming model, and bridge this gap in funding until carbon credits are available for sale.

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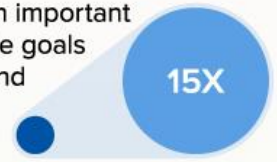
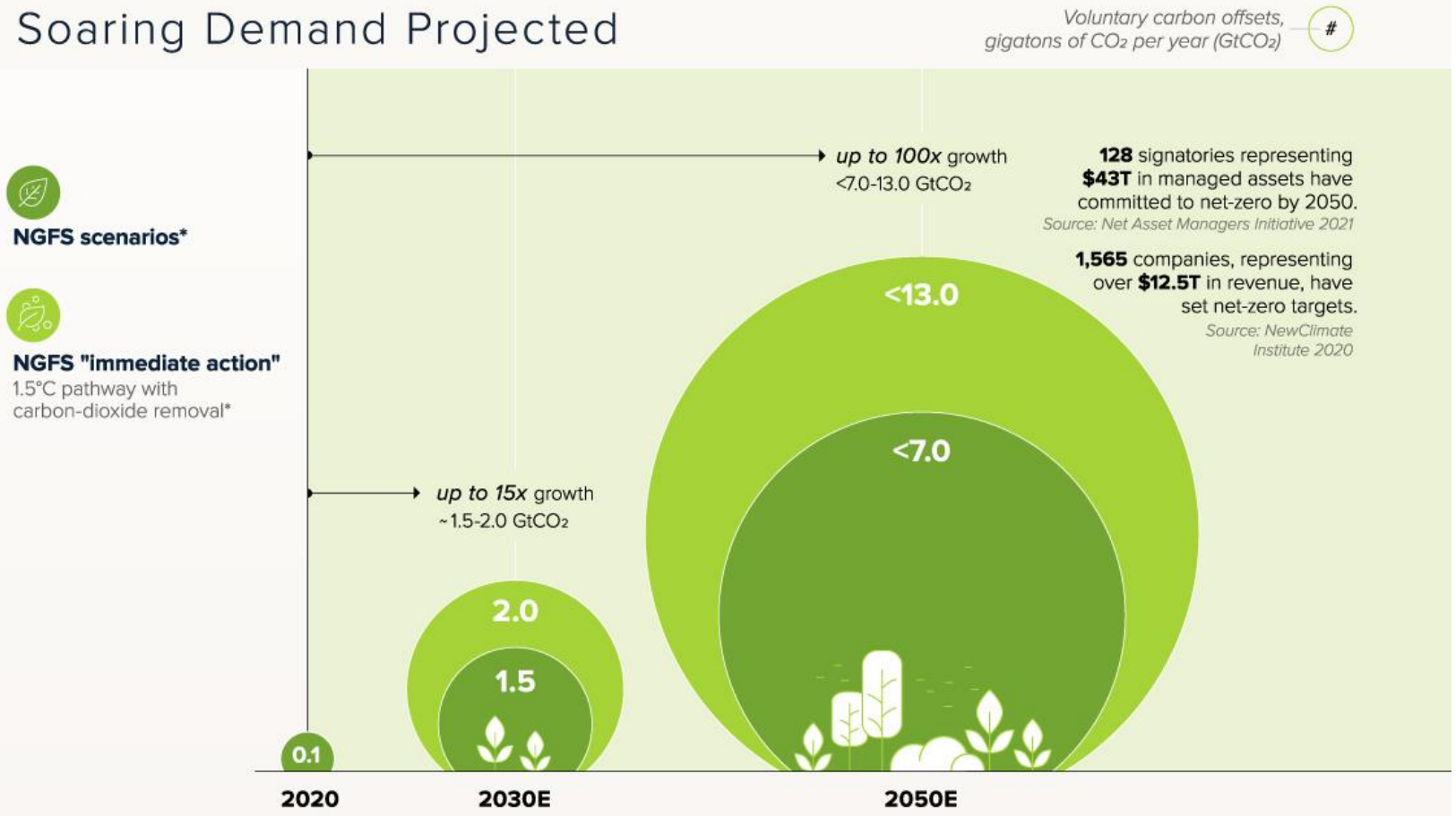
Why Demand for Carbon Offsets Could Surge

Carbon offsets—which play an important role in achieving global climate goals—could see staggering demand growth of **15-fold** by 2030.



The market for carbon offsets could be worth upward of $50 billion in 2030.

Soaring Demand Projected



Today, just **21.5%** of emissions are covered by carbon pricing initiatives, setting the stage for significant growth in voluntary carbon markets.

Source: World Bank 2021

- Rise in Net Zero commitments mean companies are looking for easy way to show immediate progress
- Nature based offsets cannot get us to Net-Zero alone – reduction of emissions must be greatest focus.

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Recommendations

- Other Delphi Experts to provide information for slide

- Offsetting ideally takes place in-country
- Separate targets for emissions cuts and GHG removals

[INSERT KEY TAKEAWAY]

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