



*N.C. Environmental Stewardship Initiative  
Energy and GHG Webinar Series*

## *Pathways to Net Zero Carbon*



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# Energy and GHG Reduction Webinar Objectives

- July '22 Greenhouse Gas Reporting: New Belgium
- March '23 Roadmap to Achieving GHG Reductions
- Potential Future Topics
  - Fleet initiatives
  - On-site GHG reduction case examples
  - Supply chain GHG reduction initiatives
  - Scope 3 emissions inventories





# How do the puzzle pieces fit together?

## GHG Emissions from Emission Inventories to Action Plans

- Greenhouse Gas Inventories Accounting
- GHG Reporting and Drivers
- Leading Target Setting Organizations
  - Science Based Targets Initiative
  - RE 100
- Action Planning
- Carbon Neutral Certification Bodies
- Resources & Opportunities

# *GHG Emission Inventory*

## GHG Emission Inventory Protocols



Scope 3	Scope 2	Scope 1
<p>Other Indirect (purchased)</p> <ul style="list-style-type: none"><li>• Employee related</li><li>• Supply Chain</li><li>• Leased Assets</li><li>• Downstream dist.</li><li>• Waste, etc.</li></ul>	<p>Indirect (purchased)</p> <ul style="list-style-type: none"><li>• Electricity Purchased</li></ul>	<p>Direct (Owned)</p> <ul style="list-style-type: none"><li>• Fuel Combustion</li><li>• Owned Fleet Vehicles</li></ul>

GHG Gases: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>

# *GHG Reporting, Disclosure and Drivers*

- CDP (formally Climate Disclosure Project)
  - 18,700 companies disclosing
  - world's leading Env. Report platform)
- Task Force on Climate-Related Financial Disclosure (TCFD)
- International Sustainability Standards Board (ISSB)
- Federal Supplier Climate Disclosure Rule (major fed supplier – to disclose on climate risk)
- EU - Corporate Sustainability Reporting Directive (CSRD) - affects 50,000 large and SME in 1/2023
- EPA Greenhouse Gas Report Program 2010-11
- Securities Exchange Commission (SEC) - Draft Rule: Climate-Related Disclosures for Investors



# GHG Reduction Goal Setting

## Science Based Targets Initiative (SBTi)

- Goals in alignment with 1.5 C Climate Limit or well below 2 C limit
- 4,632 companies participating. 2342 with targets, 1706 with net zero commitments
- Companies represent 1/3 of global market capitalization >\$38 trillion
- 4.2% annual emission reductions required to meet 1.5 C limit.
- SBTi approves companies targets and commitments
- SME pathway options
- measurement, reporting and verification (MRV) framework under development.
- Absolute verses intensity-based targets

## RE 100 Climate Group

- Large corporation with commitment to utilizing 100% renewable energy (various target years)
- Minimum pathway targets are 60% by 2030, 90% by 2040 & 100% by 2050



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

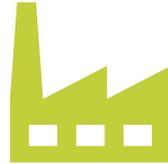
**RE** **100**



# Carbon Neutral Certification Bodies



**Certifications:**  
companies,  
brands,  
products:



**Common Elements:**

Emission Inventory,  
GHG reduction plan,  
Off-site compensation process  
(purchase quality carbon credits)  
3<sup>rd</sup> party certifications



**Certifications element and targets  
overlay with many of the previously  
mentioned protocols and targets and  
standards bodies.**



# *Resources & Opportunities*

WRP on-site EE and RE Assessments and Reports

ESI membership assistance

Any mfgs supported by SEO and ECU

Upcoming WRP Project:

Roadmap to Net Zero Carbon

On-site GHG reduction assistance (7 sites)

Tools and economic decision-making models

Beginning Fall 2023

Educational Links:

- [Greenhouse Gas Protocol](#)
- [Science Based Targets initiative](#)
- [EPA Greenhouse Gas Reporting Program \(GHGRP\)](#)
- [ICLEI Local Governments for Sustainability](#)
- [GHG Emission Factors Hub](#)

Student based Sustainable Business Projects: Duke University Nicolas School of the Environment, contact: [Jeremy.pare@duke.edu](mailto:Jeremy.pare@duke.edu)



Waste Reduction Partners

## WRP Assistance

*Initiate a Project*  
WasteReductionPartners.org

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