

# GHG Reduction Claims and Carbon Intensity Scoring

REM 2023

09.20.2023

# Presenters



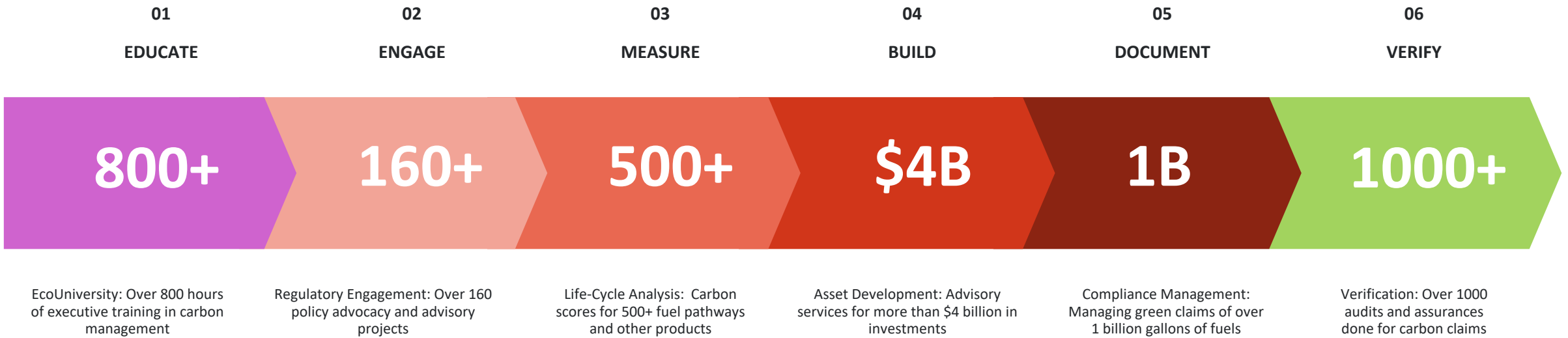
**Brad Pleima, P.E.**

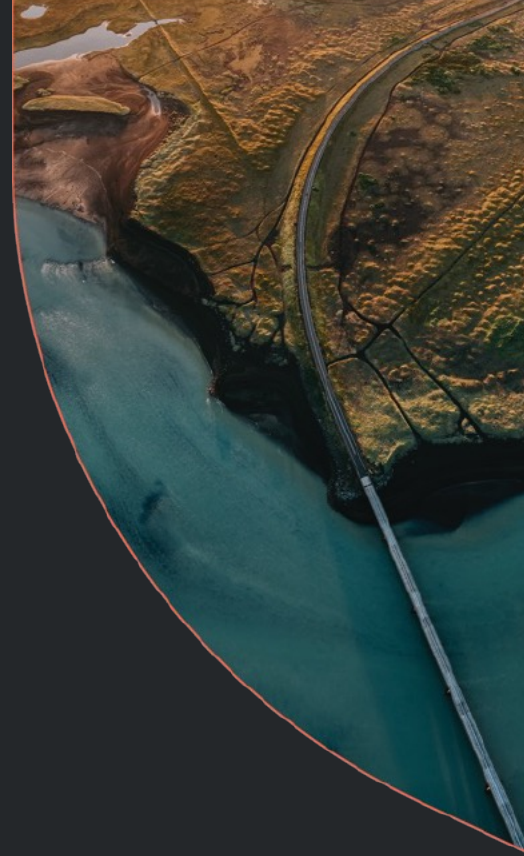
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- An advisory firm with an exclusive focus on the energy transition.
- A team of engineers, scientists, auditors, consultants, and researchers passionate about their work.
- Living and working at the intersection of climate policy, innovative technologies, and the carbon marketplace.
- Helping you navigate the disruption caused by carbon emissions and climate change.



# Why EcoEngineers?





# Carbon Accounting for Biogas, Electricity, & RNG

# RNG Market Summary & CI

- **Transportation Fuel Markets:**
  - RINs/RFS - Anywhere in lower 48 states [Volume-based]
  - California – LCFS + RINs [CI-based]
  - Oregon – CFP + RINs [CI-based]
  - Canada – BC RFLCR [CI-based]
- **Voluntary Markets:**
  - Utilities [mixed]
  - Universities [mixed]
  - Fortune 500 Companies [mixed]
  - Canada – Utilities (Fortis & Energir) [mostly CI-based]
- **Emerging Markets:**
  - Other state LCFS programs [CI-based]
  - National LCFS in Canada (Clean Fuel Standard) [CI-based]
  - Hydrogen Production [CI-based]
  - Use at Refineries [CI-based]
  - Electricity Markets [mixed]
  - EU Markets [CI-based]
  - IRA [mostly CI-based]

# The Problem



- **Biogas projects may show greenhouse gas (GHG) emission reductions advantages over conventional scenarios, but do not qualify for credits.**
- **Large corporate gas buyers and utilities want renewable natural gas (RNG) but need it to be recognized under a reliable protocol.**
- **The World Resources Institute (WRI) hasn't addressed book and claim, and we hope to create a tool that allows carbon intensity of biogas to be quantified with regards to uses as heat, liquid fuel, electricity, and digestate, that is accepted and will be used by WRI.**
- **Popular reporting standards, such as Carbon Disclosure Project (CDP), Task Force on Climate Related Financial Disclosures (TCFD), The Climate Registry (TCR), The Sustainability Accounting Standards Board (SASB), etc., do not have the tools to recognize the surging contributions of the RNG sector.**
- **Attempting to bridge the gaps that exist between regulated compliance markets and voluntary carbon markets.**

# Examples of Gap Analysis Findings – Regulated Markets

- **Avoided emission credits for other manure types that also uses anaerobic treatment system**
- **Additionality/eligibility or earning avoided emission credits with cut-off date consideration**
- **Additional emissions for increased landfill gas collection efficiency**
- **Wastewater treatment plant biosolids landfill diversion**
- **Fertilizer produced from digestate**
- **Policy factor to inflate the carbon intensity when natural gas/diesel/propane are used**
- **Electricity from biogas other than dairy/swine manure biogas**
- **Non-transportation fuel use (thermal)**



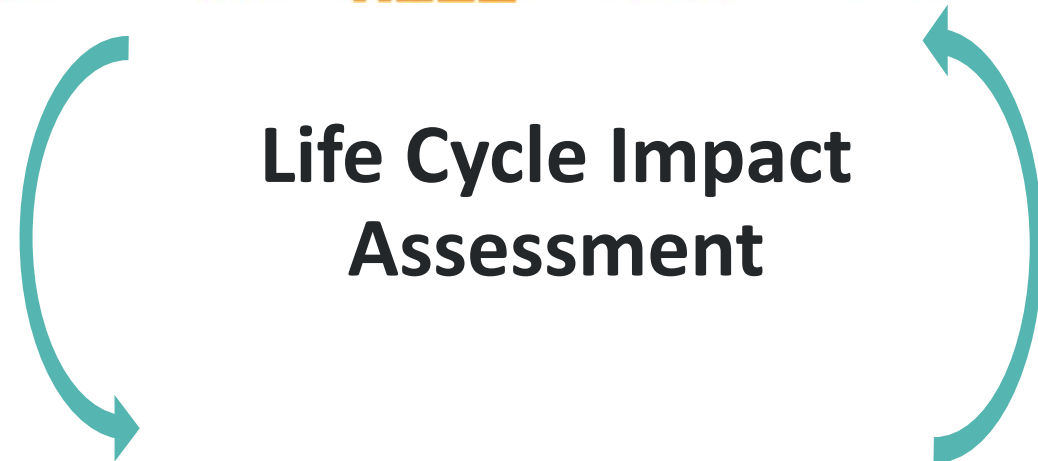
# Creating a Consistent Way to Measure the Impact of Biogas Projects

- Creating value for your business and the planet
- This project addresses GHG emissions

## UN Sustainability Goals



## Life Cycle Impact Assessment



## Biogas Projects



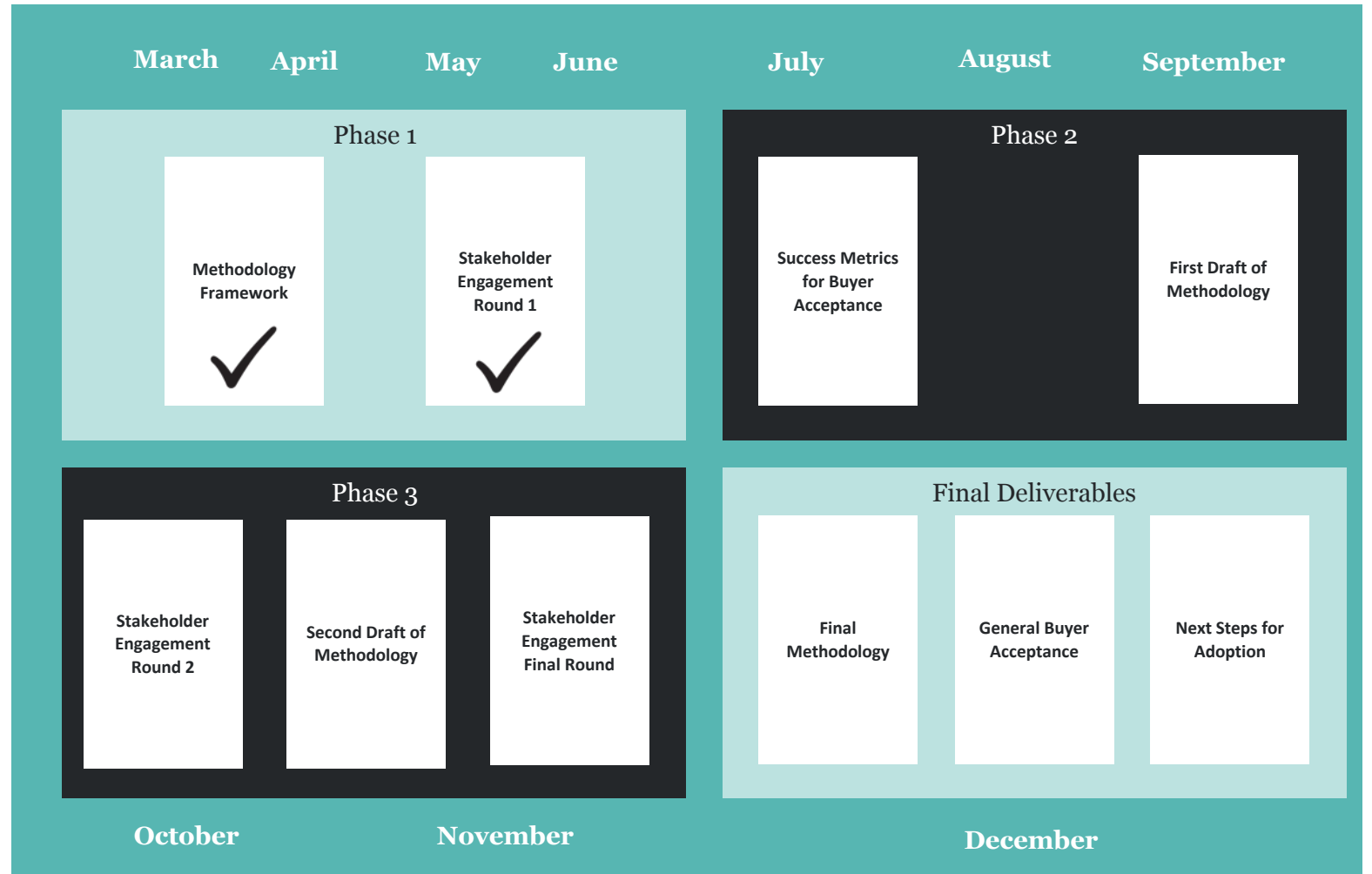
# Follow Carbon Accounting Principles

- **Relevance**
- **Completeness**
- **Consistency**
- **Transparency**
- **Accuracy**
- **Conservativeness**

# Target Areas For Project Types and Outputs

- **Project Types**
  - Landfill
  - Wastewater Treatment Plant
  - Animal Manure Digestion
  - Other Waste
  
- **Outputs**
  - Biogas to RNG
  - Biogas to Electricity
  - Biogas to Heat
  - Digestate

# Project Timeline and Milestones



# Next Steps



- **Stakeholder Review of Draft Methodologies**
  - Please share your feedback through ABC Carbon Committee participation or direct feedback to EcoEngineers
- **Publish Final Drafts**
- **Engagement with Buyers and other Key Parties**
- **Finalize by end of 2023**
- **Modeling Tools created in early 2024 (Phase 2)**

Q + A



Thank You

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