



**AMERICAN
BIOGAS
COUNCIL**

Measuring the Carbon Impact of Biogas & RNG Projects

ABC Webinar

May 9, 2023



Quick Notes



You should be able to hear me talking now. If you can't, use the questions module to describe your issue.

Two Audio Options: Phone or Computer
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Pro tip: Don't call in on our phone if your audio is set to "Mic and Speakers"

Ask questions using the Questions Panel on the right side of your screen at any time.

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The screenshot shows the GoToWebinar interface. At the top, there's a menu with 'File', 'Options', 'View', and 'Help'. Below that, a yellow banner reads 'Attendees still on hold' with instructions to 'Press *1 to Start the Broadcast for all attendees.' and a checked box for 'Record on start'. A sidebar on the left contains icons for navigation. The main content area is divided into two sections. The top section, labeled 'Audio', shows options for 'Computer audio' (unselected) and 'Phone call' (selected). It also displays dialing information: 'Dial: +1 (415) 655-0052', 'Access Code: 147-638-497 #', and 'Audio PIN: 79 #'. Below this is a 'Problem dialing in?' link. The bottom section, labeled 'Questions', shows a table with columns for 'Question' and 'Asker'. The table is currently empty. At the bottom of the interface, there are options to 'Send Privately' or 'Send to All', and a status bar showing 'Webinar Now' with 'Webinar ID: 815-417-091' and the 'GoToWebinar' logo.

← Audio

← Questions

About the American Biogas Council



The voice of the biogas industry in the US

All sectors represented

- Project developers/owners
- Equipment retailers and dealers
- Waste management companies
- Waste water companies
- Farms
- Utilities
- Municipalities
- Consultants and EPCs
- Financiers, accountants, lawyers and engineers
- Non-profits, universities and government agencies

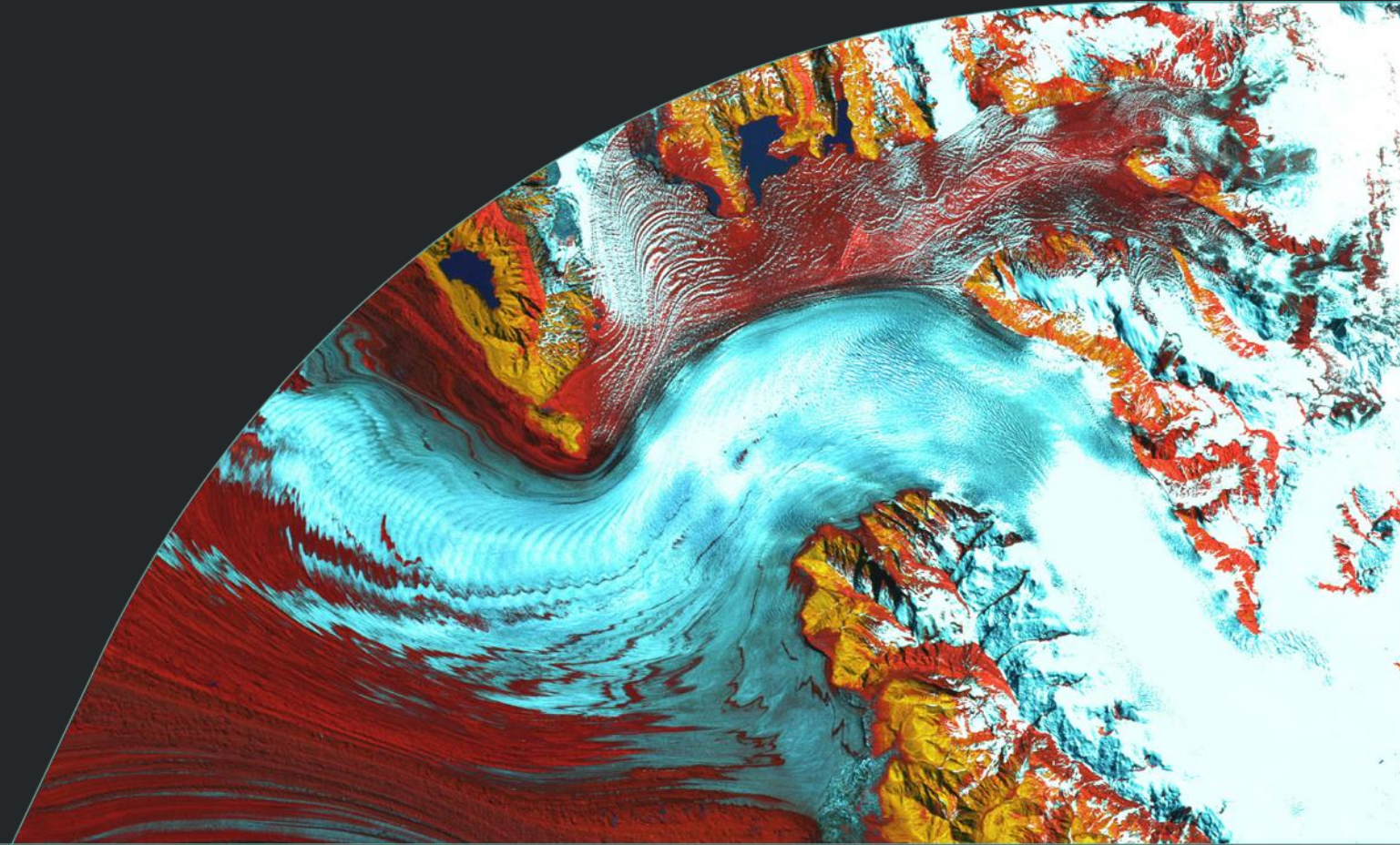
370+
organizations

5,000+
individuals



Carbon Accounting Methodology

American Biogas Council



5.9.2023

Presenters



Patrick Serfass
Executive Director
American Biogas Council



Shashi Menon
Chief Executive Officer
EcoEngineers



Brad Pleima
President
EcoEngineers



Zach Van Cleave
Project Manager
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Agenda

- **ABC Carbon Accounting Methodology Introduction**
 - The problem are we trying to fix
 - True impact of biogas projects
 - Life cycle impact assessments (LCA)
- **Project Timeline and Milestones**
 - Phase 1
 - Phase 2
 - Phase 3
- **Stakeholder Engagement and Next Steps**

The Problem

- Biogas projects may show greenhouse gas (GHG) emission reductions advantages over conventional scenarios, but do not always qualify for credits
- Large corporate gas buyers and utilities want renewable natural gas (RNG), but need carbon benefits to be recognized under a reliable protocol
- 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 multi-faceted carbon contributions of biogas and RNG
- No existing methodologies include the carbon benefits of using digestate to displace fertilizer
- There are many gaps that exist between regulated compliance markets and voluntary carbon markets.

Examples of Gap Analysis Findings – Regulated Markets

California Low Carbon Fuel Standard (e.g.,)

- **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)**

Examples of Gap Analysis Findings – Voluntary Markets

- **Boundaries**
 - Temporal: generally, projects over two years old at the time of application do not qualify for voluntary credits.
 - Physical: may not include the full lifecycle or may have a different interpretation based on individual methodologies
- **Additionality**
 - Regulatory: projects in locations where regulations exist or will be created which require gas collection (i.e. landfills) would not qualify or would lose qualification.
 - Projects must prove that they require the carbon markets to be viable

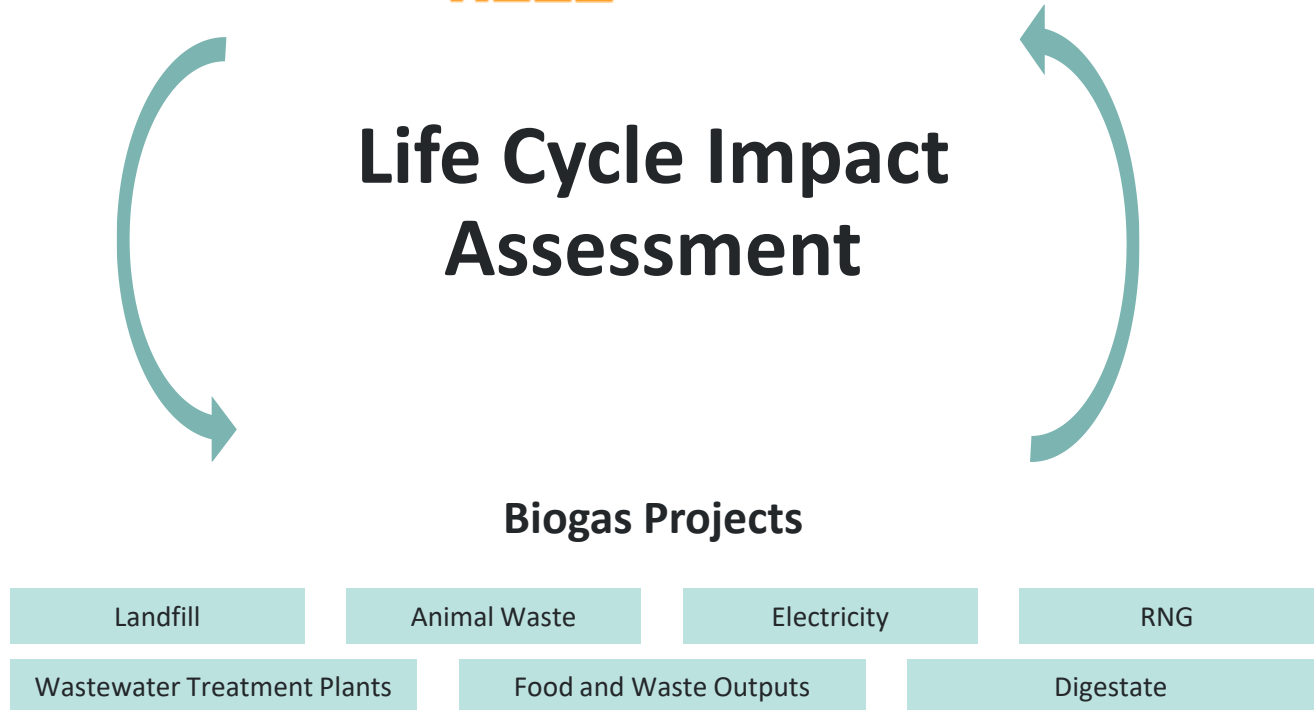
Creating a Consistent Way to Measure the Impact of Biogas Projects

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

UN Sustainability Goals



Life Cycle Impact Assessment

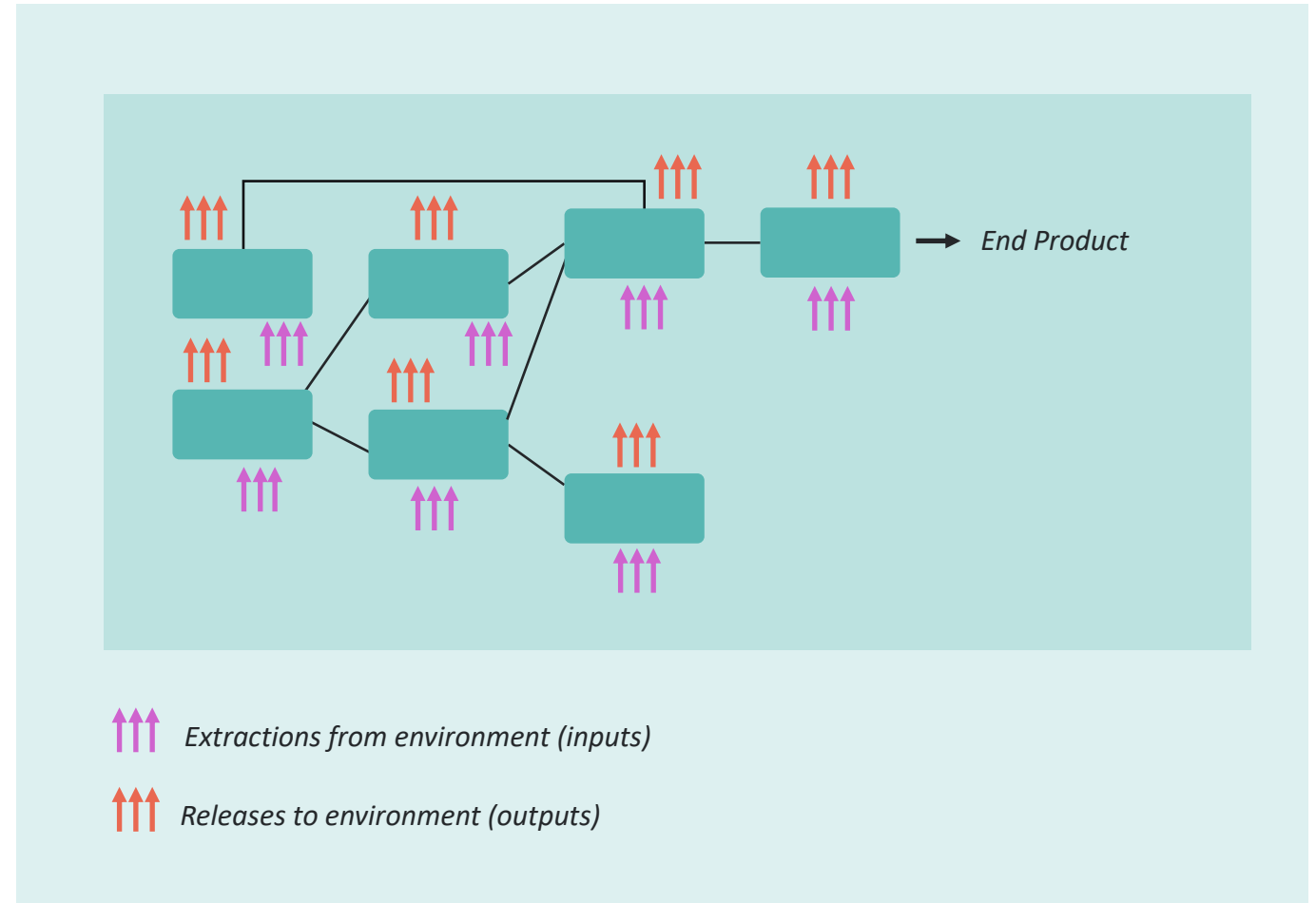


Follow Carbon Accounting Principles

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

Life Cycle Impact Assessment

- Calculation of environmental life cycle impact related to a production system/process
- All related emissions are considered for the selected environmental impact categories

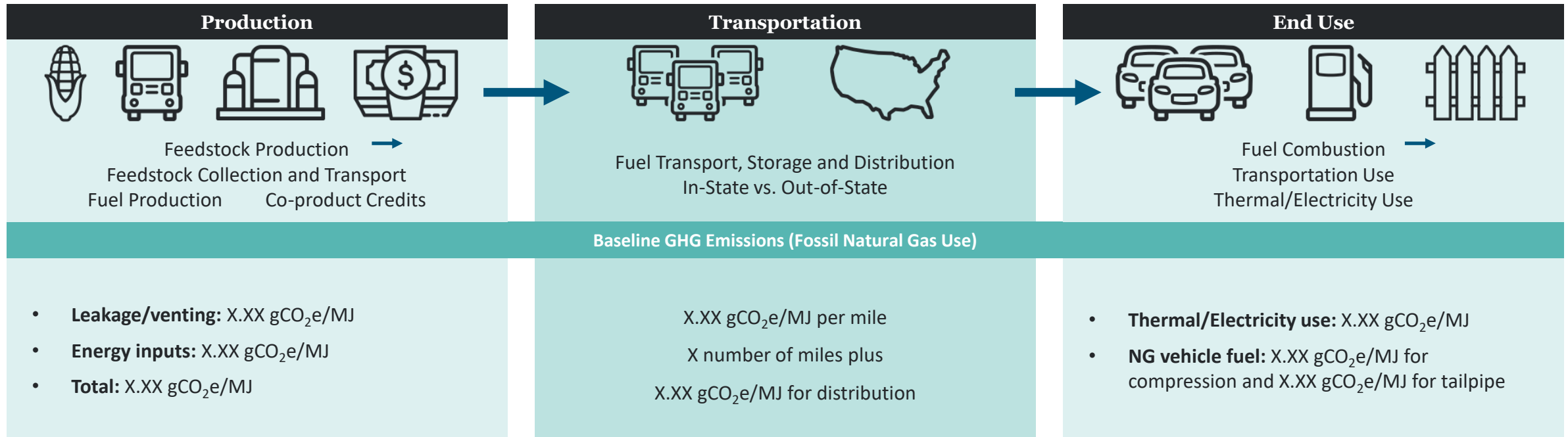


Target Areas For Project Types and Outputs

- **Project Types**
 - Landfill
 - Wastewater Treatment Plant
 - Animal Manure Digestion
 - Other Waste

- **Outputs**
 - Biogas to RNG
 - Biogas to Electricity
 - Biogas to Heat
 - Digestate

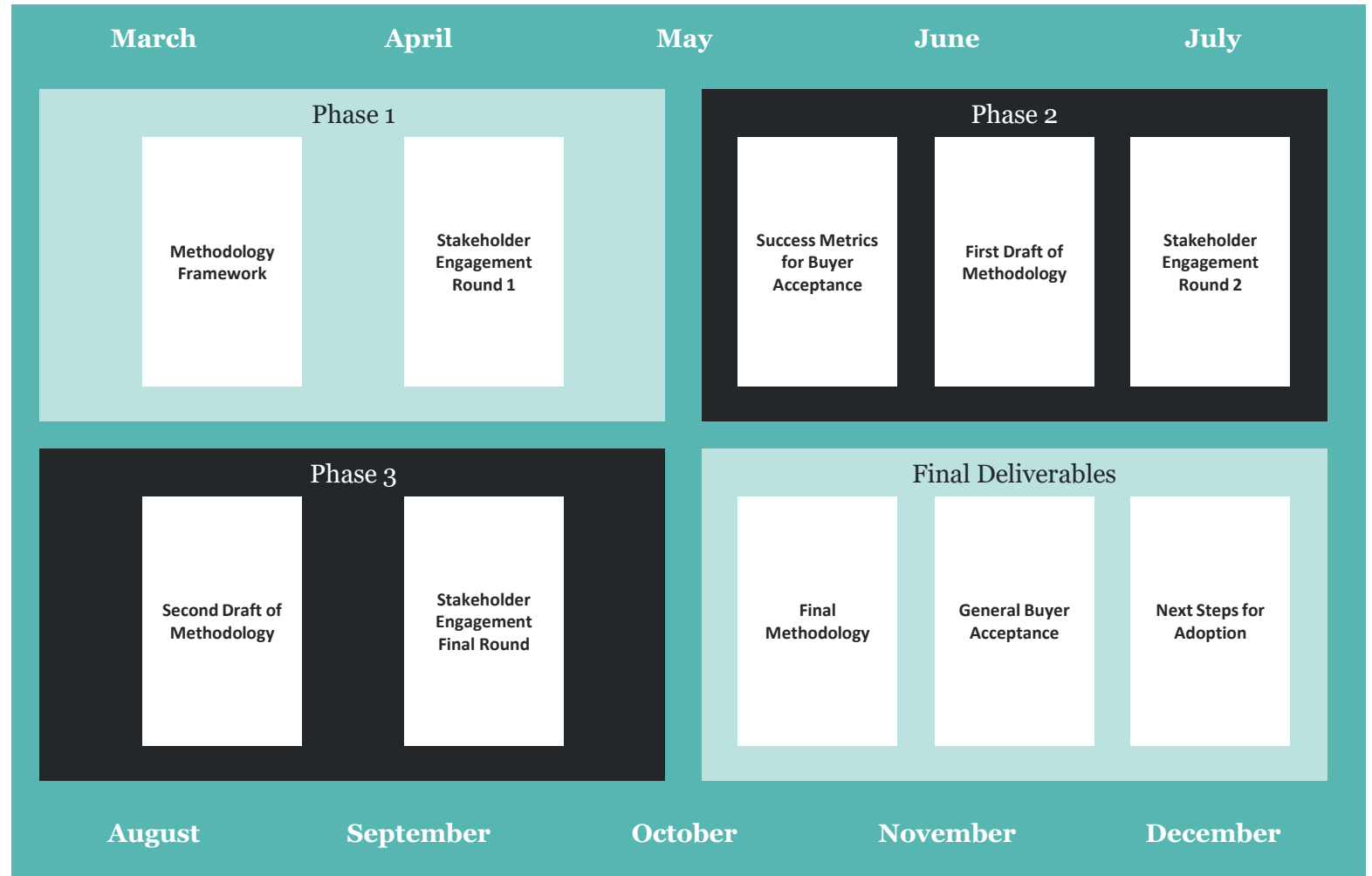
LCA System Boundaries



Selecting boundaries determine unit processes to be included in the LCA:

- **Direct and/or indirect environmental impacts**
- **Determine what is relevant to the analysis**
- **Include elements that can be changed in the process**

Project Timeline and Milestones



Stakeholder Engagement

- **Introduction: May 9**
- **Round 1 of Digital Feedback Survey: NOW!**
 - Please share your feedback through our digital survey, which you will receive via email, with questions and context to help guide feedback
 - <https://forms.office.com/r/jSFbkwTdUP>
- **Workshop at BIOGAS AMERICAS: May 16, NEXT WEEK!**
<https://biogasamericas.com/>
- **Public Webinar – TBD (June or July)**
- **Round 2 of Digital Feedback Survey – TBD (July)**

Next Steps

- **Attend BIOGAS AMERICAS on May 16 to engage in lively discussions around this topic: <https://biogasamericas.com/>**
- **Fill out the survey when you receive the link**
- **Join the American Biogas Council to participate in the Carbon Markets Committee: <https://americanbiogascouncil.org/>**
- **Stay tuned for our summer webinar announcements to include non-members and continue the discussion**

Thank you for attending!

We appreciate your participation in this project!

Questions and Answers



- **Patrick Serfass (Moderator)**
- **Shashi Menon**
- **Brad Pleima**
- **Zach Van Cleave**

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X	Question	Asker
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Thank you!

Don't forget to fill out the **survey & poll questions** after the webinar

Become a member!

- Receive regulatory and policy intelligence
- Connect with other biogas and anaerobic digestion leaders
- Support the industry's growth and outreach

See you at BIOGAS AMERICAS in Chicago next week!

Thanks for attending!