

BREAKOUT SESSION 1: ASSESSING THE OPPORTUNITY

Objectives

- Validate the rationale for a systems oriented terrestrial biosequestration and (bio-energy focused) agricultural production program
- Identify the potential avenues and impacts of a technology-focused biosequestration program
- Begin to assess the ARPA-E program straw model

What's most exciting?

- You've heard A LOT. What did you:
 - Find most compelling?
 - What do you push back on?
 - Where can ARPA-E make the biggest impact?

Measuring success over ARPA-E Program Timeframes

- ARPA-E programs are typically 3 years long. Soil carbon is slow-changing and difficult to measure.
 - What could we (you) anticipate delivering over 3 years? 5? Or 10?
- How can we validate emissions reductions? Over what time horizons?
- How can productivity gains be measured and valued? Over what time horizons?

Technology gaps

- What are the current technology challenges or gaps?
 - What is the need/potential impact for field vs. lab work?
 - Which focus area/tools could yield the biggest gains:
 - root imaging? soil chemistry analytics? And/or microbiome analysis?
- Is this a systems challenge or a technology challenge?

U.S. Competitiveness

- Why is the now the right time to undertake such program?
- What is being done elsewhere?
- Is the U.S. lagging other parts of the world in below-ground phenotyping?