



# **Item 10: Industrial Carbon Dioxide Utilization for Value Added Products – GFO-23-502**

March 17, 2025 Business Meeting

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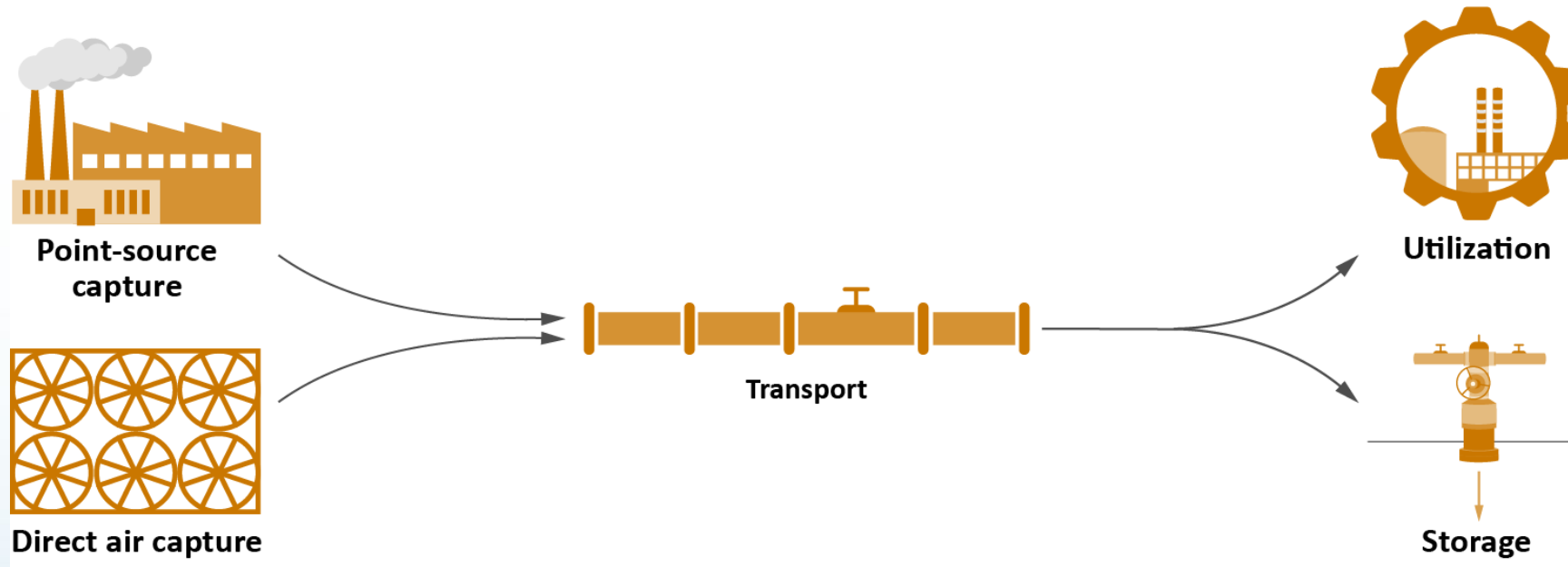
# Solicitation Overview

- Gas R&D Program solicitation to advance technical and market potential of carbon dioxide (CO<sub>2</sub>) utilization
  - Capture CO<sub>2</sub> from industrial emissions or air
  - Decarbonize hard-to-abate industries by reducing fossil gas use
  - Create value-added products from CO<sub>2</sub>
- Solicitation Funding:
  - 2 Projects
  - \$6.1M with \$5.2M in match funding



# Benefits to Californians

- Reduce greenhouse gas emissions and fossil fuel use
- Improve air quality for local communities
- Support state decarbonization goals for the industrial sector



Source: U.S. Government Accountability Office



# Item 10a: Maas Energy Works LLC.

- **Location:** California Central Valley
- **Project Focus:**
  - Capture CO<sub>2</sub> from industrial dairy manure digesters and use it to generate carbonic acid for farm irrigation
  - Replace the use of sulfuric acid and/or sulfur burning for farm irrigation
- **Objectives:**
  - Capture >1,850 tons CO<sub>2</sub>/year from biogas facility
  - Deploy to 14,500 acres of farmland
  - Validate carbon sequestration at 4,000 lbs/acre/year



Source: ECO<sub>2</sub>MIX



# Market Potential

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- **Current ECO<sub>2</sub>MIX deployment:**
  - 12,000 acres using commercial CO<sub>2</sub> sources
  - 0.3% market share
- **With grant funding:**
  - 30% cost reduction for customers
  - 7-year return on investment
- **After the project:**
  - 3 support letters of intent to purchase totaling \$12M
  - 49,000 acres capturing 6,600 tons CO<sub>2</sub>/year



# Staff Recommendation

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- Approve the grant agreement
- Adopt staff's determination this action is exempt from CEQA