

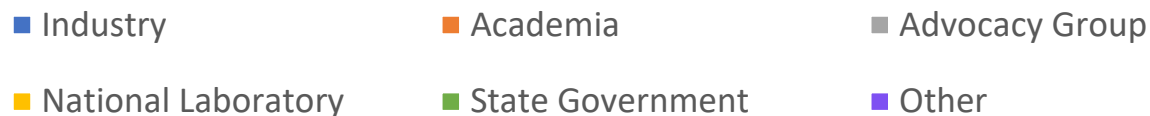
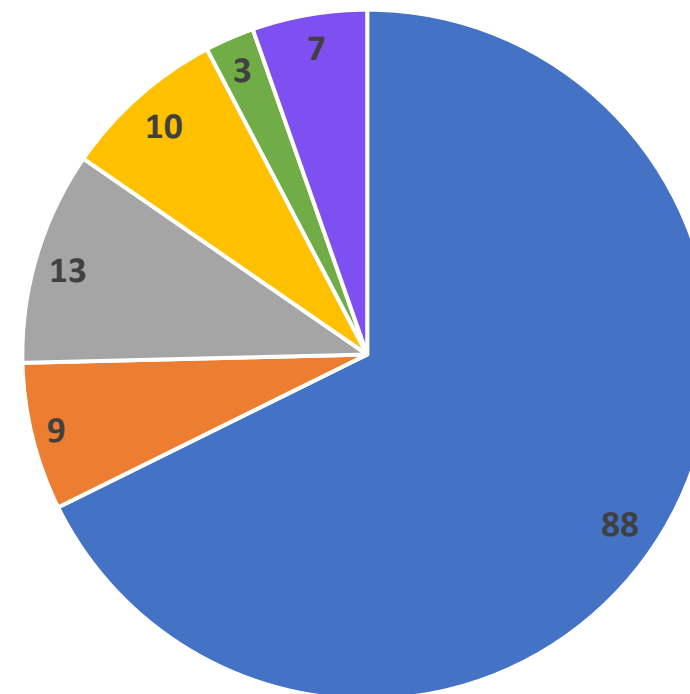
Technical Area 1 – Point-Source Carbon Capture Technologies and Integrated Capture and Storage Projects



Response Overview

- 130 respondents
 - Industry (88)
 - Academia (9)
 - Advocacy Group (13)
 - National Laboratory (10)
 - State Government (3)
 - Other (7)
 - Test center; consulting firm; service provider; venture capital firm

Respondents for TA1



Technical Area 1 – Point-Source Carbon Capture Technologies and Integrated Capture and Storage Projects- Overall Summary



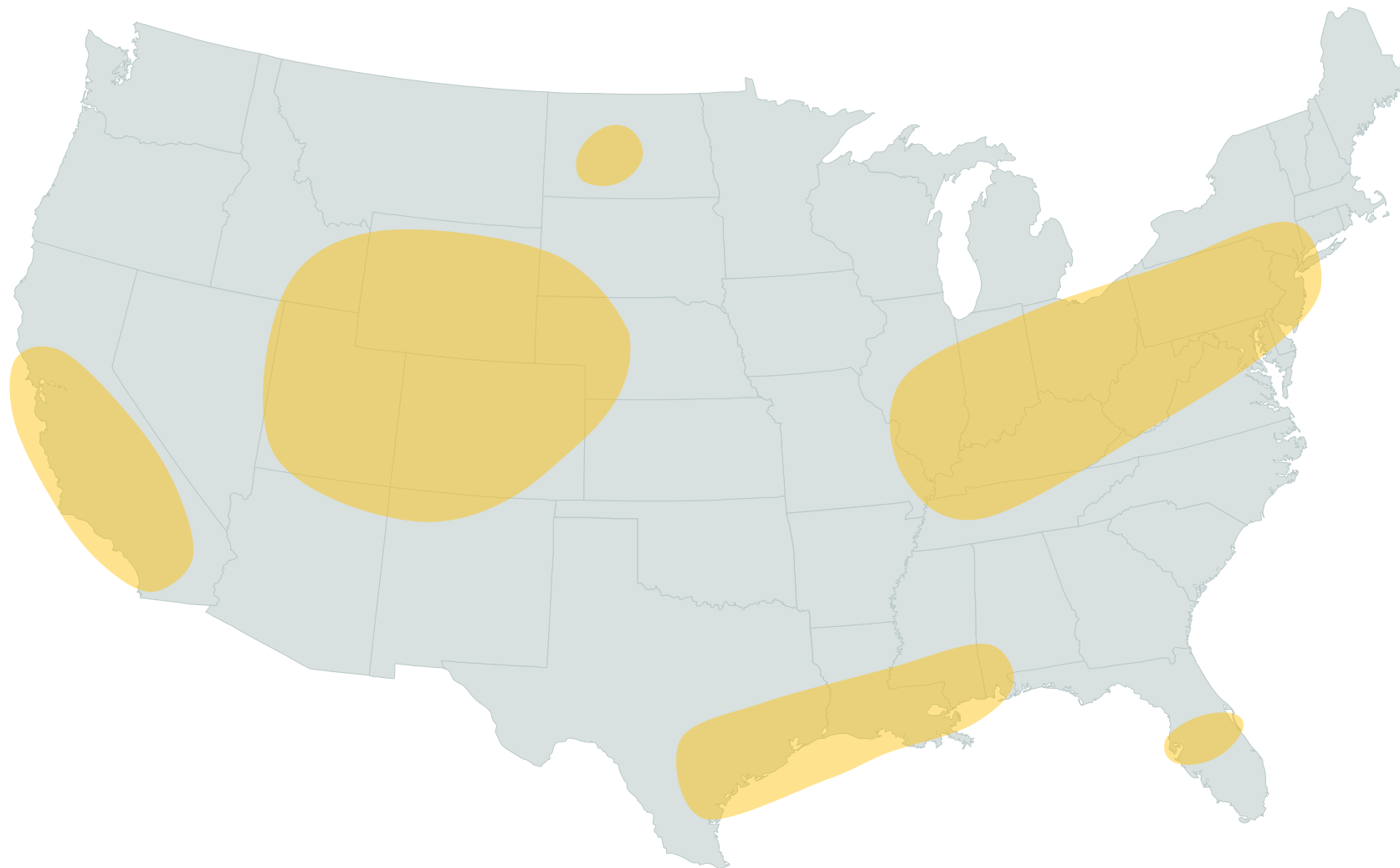
Overview of Major Ideas from Technical Area #1 Responses

- Respondents described a broad range of applications for carbon capture technologies in both power generation and industrial sectors. The maturity levels of the technologies were nearly evenly distributed between lab/bench scale, pilot scale, and demo/commercial scale, with total carbon capture rates ranging from 50,000 tonnes per year up to over 1.5 million tonnes per year.
- The most commonly reported technical and engineering risks were scaling up of technology, integration of technology into existing systems, emissions control, handling variability in process flows, lifetime of capture materials, available equipment space, and eliminating financial risks.
- Host sites can be located in rural and industrial areas, with varying demographics and local interests that are best addressed on a case-by-case basis. Nearby or onsite fuel resources and/or storage options are beneficial to limiting additional emissions and lowering costs.
- Favorable economics remains a consistent challenge, and many proposed projects rely on federal and state policies that encourage investment in capture technologies. 45Q provides a critical benefit for many, but it is still considered inadequate by most.
- Permitting can be a critical limiting step, especially with Class VI well permits from EPA. Well-defined and reliable policy is key to ensuring investor confidence in large-scale projects.

Technical Area 1 – Point-Source Carbon Capture Technologies and Integrated Capture and Storage Projects- Potential Demonstration Regions



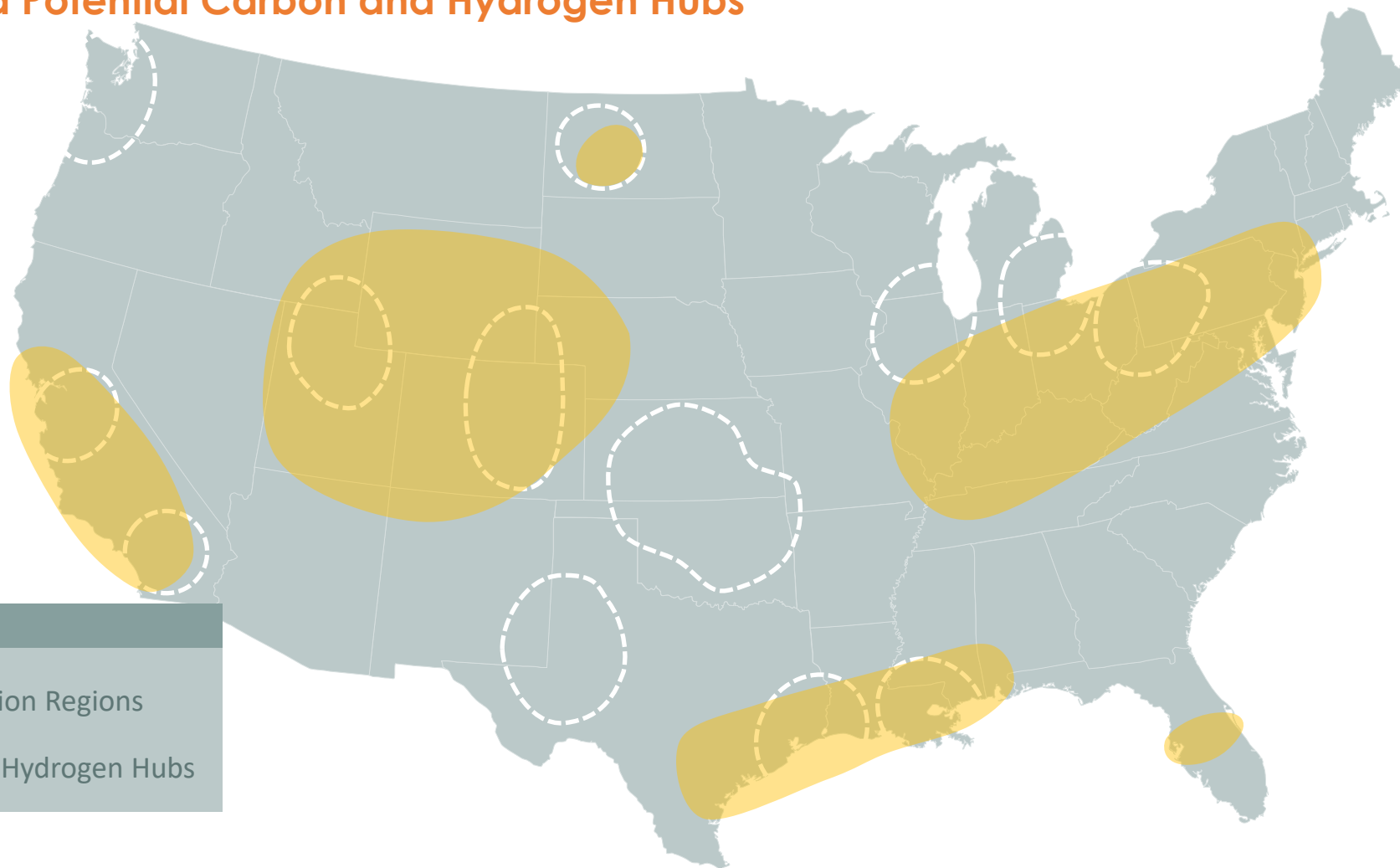
Potential Demonstration Host Site Regions





Technical Area 1 – Point-Source Carbon Capture Technologies and Integrated Capture and Storage Projects- Potential Hub and Demonstration Regions



Respondent Identified Potential Demonstration Host Site Regions with Great Plains Institute Identified Potential Carbon and Hydrogen Hubs



LEGEND

-  Potential Demonstration Regions
-  Potential Carbon and Hydrogen Hubs

Note: Potential Carbon and Hydrogen Hubs identified from Great Plains Institute
“An Atlas of Carbon and Hydrogen Hubs for United States Decarbonization” – (not a part of RFI responses)
[GPI's Carbon and Hydrogen Hubs Atlas \(betterenergy.org\)](https://www.betterenergy.org)