

CCUS Carbon Markets Development Voluntary Carbon Markets and CCUS Methodology Updates

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Carbon Markets

- Compliance: Government-mandated cap and trade system where carbon credits are one component of an emission reduction strategy
- Pre-compliance: Based on the possibility or probability that carbon credits may be required to reduce emissions as part of future compliance requirements; regulatory risk management strategy
- Voluntary: Participants seek to voluntarily reduce their own emissions profile and have determined that buying carbon credits is one way to achieve that goal

Current and Developing GHG Programs

- US Voluntary Carbon Market Standards/Registries
 - American Carbon Registry (ACR)
 - Verified Carbon Standard (VCS)
 - Climate Action Registry (CAR)
- California cap-and-trade program under AB32
- International
 - UNFCCC Clean Development Mechanism (CDM)
 - European Union Emissions Trading Scheme (EUETS)
 - Canada (Alberta, CSA)
 - Others (Japan, Australia, China, South Korea)

Voluntary Registries Update

- Currently, VCS and CAR have little interest in developing a CCUS methodology
 - VCS does not recognize CCS as a qualifying offset project
 - CAR focused on methodologies for other project types; takes guidance from CARB on prioritizing methodology list
- ACR has prior experience with CCUS projects and is aligned with CARB offset protocol requirements
 - Current CCUS projects on ACR are individual protocol based
 - Standardized approach that includes monitoring in line with progress in research and current regulations
 - ACR methodologies have been adopted by CARB
 - ACR applied to CARB to gain offsets project registry status

CCUS Methodology Objective

- Develop a methodology to monetize carbon credits from commercial CCUS projects
 - CO₂ sequestered during enhanced oil recovery (EOR)
 - current use in the voluntary and pre-compliance greenhouse gas (GHG) markets
 - future use in compliance GHG markets
 - include a cost-effective monitoring approach

CCUS Methodology Development for the ACR

- Used the Pew methodology's accounting framework in concert with ACR's standards for project eligibility
- ACR project eligibility requirements include:
 - Start Date and Crediting Period
 - Title to Offsets
 - Additionality
 - Ownership
 - Permanence
 - Liability
 - Secondary impacts
 - Independent 3rd party verification

CCUS Methodology - Current Status & Next Steps

- Blue Strategies has contracted with ACR to initiate the methodology approval process
- Step 1: Methodology has been reviewed by ACR and has received preliminary approval; additional review comments being addressed prior to public comment period
- Step 2: The methodology to be posted on the ACR registry website for a 4-week public comment period; Blue Strategies to address comments (expected completion by Jan. 15 2012)

CCUS Methodology - Current Status & Next Steps

- Step 3: Methodology to undergo a scientific peer review process; blind review by 3-4 peer reviewers selected by ACR (expected completion Apr. 15 2013)
- Step 4: Blue Strategies incorporates comments; ACR final review and approval; methodology posted by ACR for use by project proponents (expected completion May. 15 2013)