RICE CULTIVATION OFFSET PROTOCOLS

UPDATE ON RECENTLY RELEASED AB 32 PROTOCOL

Washington, DC
November 6, 2014
Main Issues for ARB Rice Protocol

What have been the key issues for growers/developers

Do economics to participate pencil out for growers?

- Can growers generate incremental income from reducing emissions
- 1 ton/acre/year max, average grower 300 acres, $10/ton = $3000 per year
- Exclusion of credits for N2O or SOC, asymmetric fuel emissions

Aggregation

- One entity with sole representation in ARB, many projects
- No grower CITSS accounts
- Verifiers may deploy sampling for data evaluation and site visits
- Partial invalidation
- Selected field/farmer level data could be treated as commercially sensitive data and not publically disclosed

Early Action

- Accept existing protocols (ACR, CAR) for limited period
- Start date and reduced data requirements

Data Requirements

- Clarity of what data/evidence is required and what is left to verifier's discretion
- Open requirements to allow use of new monitoring technologies
ARB General Eligibility Requirements

Regions
- California Rice Growing Region includes Sacramento Valley only
- Mid-South Rice Growing Region includes (1) Mississippi River Delta mainly in Arkansas, extending into Mississippi and Missouri and (2) Gulf Coast area in Louisiana

Baseline must contain at least two rice growing years in five years

Eligible Activities
- Switch from wet seeding to dry seeding (eligible in the California Rice Growing Region only)
- Alternate wetting and drying (eligible in the Mid-South Rice Growing Region only)
- Early drainage in preparation for harvest (eligible in both Rice Growing Regions)

Quantification uses DNDC

Voluntary protocol activities excluded from ARB Protocol
- Baling projects (i.e. rice straw is removed from the fields after harvest). Staff reviewed this option and determined that there was not enough information to make a determination as to the potential adverse environmental impact from the removal of the rice straw.
- Fuel efficiency/fuel switching
- Nutrient management
The “Scarlet A” - Aggregation

Current ABR Protocol Stance

- Authorized (APD)\(^1\) that operate rice cultivation projects on behalf of multiple OPOs
- Can submit a consolidated Offset Project Data Reports (OPDR) under one cover
- Consolidated OPDR includes required information for each project, including the unique ARB project identification number
- Each project will be independently verified and an offset verification statement issued for each project under the consolidated OPDR
- For transparency, project information will be made publically available.
- If an APD is designated, the Offset Project Operator must designate an individual of the APD as a Primary Account Representative on the Offset Project Operator’s tracking system

1. § 95974. Authorized Project Designee.
Early Action

Early Action Credit

- A project may be eligible for ARB offset credits, for GHG emission reductions on eligible project activities in cultivation years that started as early as 2006 if:
  - Listed with an Offset Project Registry or ARB prior to Dec 31, 2014
  - Submits the preliminary OPDR(s) to the Offset Project Registry or ARB by December 31, 2015 for reporting period(s) ended prior to December 31, 2014

Date Requirements

- Same as existing protocols
- No reduced data requirements for back years
# General Practice Data Requirements

## Baseline and Practice Years

### Crop
- Type
- Plant and harvest date
- Fraction of leaves + stem left in field after harvest
- Yield

### Tillage
- Number of events
- Dates
- Depth

### Use of synthetic fertilizer or manure
- Number of applications
- Date
- Method
- Type
- Application Rate

### Irrigation
- Number
- Dates
- Type
- Application rate

### Fuel Use
- Quantity of fuel
- Type
- Horse power or operation time
- OR, time required and field dimension

### Residue Management
- Crop residue management approach
- Fraction of crop residue left in the field

### Rice Specific
- 50% heading date
- Emergence Date
Practice Specific Eligibility

- Permanent flooding must be delayed until the rice stand is established to a four to six-leaf stage
- Only fields that were wet seeded during each rice cultivation year of the baseline period are eligible for crediting
- Dry-seeding activities are only eligible for crediting in the California Rice Growing Region

Additional information for dry seeding projects

- Planting preparation description and date
- Planting date and method and
- The date a field is fully flooded in preparation for seeding
Early Drainage Specific

Practice Specific Eligibility and Yield “protection” for Leakage

- Drain or dry standing water, earlier than baseline average during the rice growing season in preparation for harvest
- CA there must be standing water present within a 50-foot radius of the water inlet of a field 24 days after fifty-percent heading
- CA - Determine fifty-percent heading date using specific sampling procedure
- Midsouth - Drainage may begin when ninety-five percent of main stem panicles have at least one yellow hull grain
- Midsouth - Determine fifty-percent heading date using specific sampling procedure

Additional information for early drainage

- The date that the water board was pulled from the weirs or the flooding of the field was stopped; and
- Harvest date
Alternate Wetting and Drying Specific

Practice Specific Eligibility
- Cyclically wet and dry the rice fields during the growing season to reduce methane emissions

Soil moisture readings must be taken to demonstrate
- End of each “drying,” the soil at 10 centimeters depth must reach a non-saturated point, but maintain a moisture level above fifty percent
- Sampling procedures depends on grading of field
- Soil moisture reading may use stationary or portable soil moisture sensor that can generate instant soil moisture reading
  - Meters requires accuracy checks
  - Procedures must be defined

Additional information for AWD
- The dates that the field was flooded and the water board was pulled from the weirs or the flooding of the field was stopped; and
- Harvest date
Acceptable Project Activity Data Forms

For Project Activity Related Data

A digital photo or photographs for each field taken from various vantage points clearly establishing project activities

- Should be taken using a device that has geotagging feature
- Includes date and geocoordinates in the metadata of the photograph

OR

Satellite imagery with spatial and temporal resolution adequate to clearly establish project activities

OR

Video or photographic communication with the verification body pursuant during project activities

Other information not identified here can be used to document project activities

The information identified here may not be sufficient to document a project activity alone
Verification Bodies

Each verification team must include an agronomic expert with one of the following qualifications:

- An agronomist with at least five years of direct professional experience in rice cultivation; or
- A local or state agricultural cooperative rice farming advisor.

The agronomic expert on the verification team must evaluate the fifty-percent heading or the one yellow hull requirement for yield.

Detailed agronomic expert’s assessment must be included in the Offset Verification Report.
Main Issues for ARB Rice Protocol

*So where did we end-up?*

Do economics to participate pencil out for growers?
- Nothing significant has changed to improve grower economics

Aggregation
- Idea implemented, but reality imperfect
  - No sampling for data and field visits
  - Individual verification statements
  - Full project data disclosure

Early Action
- Added use of other protocols, only 6 weeks to list!
- Back years under ARB to 2006, but data requirements may not be possible

Data Requirements
- Clarity on forms of data highly improved
- Allow use of new monitoring technologies that can work for some forms of data
Contact Us

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