Ag Offsets & the Voluntary Market

C-AGG Washington, D.C.
November 5, 2014
## Ag-related protocols @CAR

<table>
<thead>
<tr>
<th>Protocol</th>
<th>First Adopted</th>
<th>Current Version</th>
<th>CAR Projects (CARB)</th>
<th>CRTs (ROCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Manure Management</td>
<td>2007 (CARB 2011)</td>
<td>v4.0</td>
<td>80 (29)</td>
<td>1,725,302 (85,819)</td>
</tr>
<tr>
<td>Rice Cultivation</td>
<td>2011 (CARB 2014)</td>
<td>v1.1</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Nitrogen Management</td>
<td>2012</td>
<td>v1.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Avoided Grassland Conversion</td>
<td>2015</td>
<td>v1.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Reserve activity

Climate Action Reserve Protocols

- **ARB Early Action**: 6,884,527
- **Non-ARB Retirements**: 12,974,264
- **Active CRTs**: 30,239,331
Voluntary retirements

- 78 different account holders have retired CRTs
- Top 10 account holders made 50% of voluntary retirements:

1. 1.32M Pacific Gas & Electric Company
2. 74.7k Origin Climate Inc. (TerraPass)
3. 69.2k Element Markets, LLC
4. 64.1k LSB Industries, Inc.
5. 58.6k 3Degrees Inc.
6. 53.1k J.P. Morgan Ventures Energy Corporation
7. 52.8k NEML1, LLC (Element Markets)
8. 52.5k Bonneville Environmental Foundation
9. 50.7k Seattle City Light
10. 41.8k Blue Source, LLC
Market demand

- Voluntary buyers are interested in the story as much as the GHG reduction.
- The voluntary market loved livestock and forest credits, but can’t compete with the prices in the ARB compliance market:
  - Voluntary prices $0.50 – 8+ ??
  - Compliance prices ~$8 – 10
- Less “charismatic” projects benefit from partnerships or geographic proximity to buyer.
Market demand

• Areas of voluntary activity on the Reserve:
  – Retail programs & brokers (TerraPass, PG&E, Climate Trust, Sterling Planet, 3Degrees)
  – Large corporations (Disney, Interface, International Speedway, Google, Chevy, Kohls, Microsoft, eBay)
  – Events (Sochi Olympics, NACW)
  – Buildings (individual buildings, LEED compliance)
  – CEQA mitigation (semi-compliance)

• Buyers now prefer registered credits
Market supply

- Landfill, 11,101,814
- Forest, 6,545,440
- Nitric Acid, 5,318,810
- Coal Mine, 780,685
- Livestock, 810,622
- Organic Waste Digestion, 226,085
- ODS - U.S., 1,960,711
- ODS - International, 3,495,164
- Active CRTs
Livestock offsets will almost all be going to ARB.

If we get Rice projects, assume they will go to ARB.

Nitrogen management:
- Low/no margin, yield concerns, ARB risk, 1st-mover risk

Grassland:
- Projects will be smaller than forest, but potentially still a lot of interest
- 1.16M Forest Avoided Conversion issued (6 projects)
Grassland protocol

• Avoided conversion of grassland to cropland
• Standardized additionality screens
• Standardized emission factor-based quantification
• Focus on reducing transaction costs
• Public comment mid-March 2015
• Board adoption June 2015
• www.climateactionreserve.org/how/protocols/grassland/
Conclusion

• Offset supply is not the problem
• Need demand to push up prices and make ag offsets more financially attractive
Contact

Max DuBuisson
Senior Policy Manager
max@climateactionreserve.org
(213) 785-1233