Special Topics Series: A Path Forward for Dairy Digesters in CA
### Today's Webinar

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| **1. Welcome** | Max DuBuisson  
Climate Action Reserve |
| **2. Air emissions permitting** | Ramon Norman  
San Joaquin Valley Air Pollution Control District |
| **3. Water emissions permitting** | Steve Klein  
Regional Water Quality Control Board |
| **4. Case Study: Fiscalini Farms** | Nettie Drake  
AgPower Development |
| **5. Case Study: Stockdale Dairy** | Jackson Lehr  
California Bioenergy |
| **6. Offset Markets Under AB32** | Max DuBuisson |
| **7. Q&A** |   |
AB32 creates new revenue opportunities digester projects

OFFSET MARKETS UNDER AB32
Cap-and-Trade in California

• Assembly Bill 32 passed in 2006, cap-and-trade regulation adopted in Dec 2010
• Program begins Jan 1, 2012 and runs through 2020
  – Divided into three compliance periods of 3 years each
  – Narrow scope for 1st period, broad scope beginning Jan 1, 2015
• Must have compliance instruments equal to your emissions for each year
  – **Allowances**: most allocated at the beginning, but auctioned in future years
  – **Offsets**: can be used for up to 8% of your compliance obligation
Offsets for Compliance

- ARB will assess and approve third-party protocols and accredit third-party registries to issue offsets
  - Four Climate Action Reserve protocols have been adopted (including U.S. livestock), more will be considered in March
  - Offsets may be generated by projects outside of CA
    - The process is not yet determined for becoming an accredited registry, but the Reserve will apply as soon as is possible
- The Reserve program will be coordinated with the ARB program to ensure a steady supply of offsets for the CA market
- ARB will have its own guidelines for verification, and will accredit independent verification bodies
Regulatory Next Steps

• There are still many unknowns that are being finalized
  – What is the process for project developers?
  – What is the process for covered entities?
  – Allowance allocation details

• ARB staff are continuing to update the regulation this year, final changes to be adopted October 2011

• Public meeting to talk about additional offset protocols will be in early March

• 15-day public notices, as well as other public workshops, expected through the Spring and Summer
Market Shifts

• Prices for project types that have been adopted (including livestock) have seen a dramatic increase

• Compliance-ready CRTs are trading for $8-10 each

• The allowances have a price floor of $10, and the price is expected to continue to rise over time as the cap is lowered
  – Offset demand will increase as allowance supply is constrained

• 61 livestock digester projects have already been submitted to the Reserve
  – 15 have completed verification, earning 247,363 CRTs total
## CA Carbon Market

<table>
<thead>
<tr>
<th>Compliance Period</th>
<th>Year</th>
<th>Allowance Budget (mt CO₂e)</th>
<th>Total Offset Demand</th>
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<tbody>
<tr>
<td><strong>First</strong> (narrow scope)</td>
<td>2012</td>
<td>165,800,000</td>
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<tr>
<td></td>
<td>2013</td>
<td>162,800,000</td>
<td></td>
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<tr>
<td></td>
<td>2014</td>
<td>159,700,000</td>
<td>39,064,000</td>
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<tr>
<td><strong>Second</strong> (broad scope)</td>
<td>2015</td>
<td>394,500,000</td>
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<tr>
<td></td>
<td>2016</td>
<td>382,400,000</td>
<td>91,784,000</td>
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<tr>
<td></td>
<td>2017</td>
<td>370,400,000</td>
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<tr>
<td><strong>Third</strong></td>
<td>2018</td>
<td>358,300,000</td>
<td></td>
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<tr>
<td></td>
<td>2019</td>
<td>346,300,000</td>
<td>83,104,000</td>
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<tr>
<td></td>
<td>2020</td>
<td>334,200,000</td>
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The Reserve process

Each reporting period

1. Open an account
2. Submit project
3. Reduce emissions
4. Verify the reductions
5. Registered CRTs issued
   - Hold, sell, or retire CRTs

The process for creating compliance offsets is not yet determined, but it is expected to be similar to our current process.
Livestock Project Protocol v3.0

- Capture and destruction of CH\textsubscript{4} from a biogas control system that digests cow or pig manure that was previously handled in an uncontrolled anaerobic lagoon
- Gas may be destroyed onsite (flare, generator, boiler) or offsite (pipeline, CNG vehicles)
- Only new projects are eligible (submit paperwork within 6 months of startup)
- Credits are issued for CH\textsubscript{4} that \textit{would have been} emitted from the lagoon, minus the emissions from the project itself
- Third-party verification must be conducted at least every 2 years (CRTs only issued following successful verification)
- Projects that co-digest with other wastes may be eligible as an Organic Waste Digestion project, but this protocol is not yet adopted for compliance
More Information

- [www.climateactionreserve.org](http://www.climateactionreserve.org)
- (213) 891-1444
- [http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm](http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm)