Comment 1 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Comment on SB1383 Requirements for Dairy and Livestock
Comment:

[The following was a comment/question submitted by email at the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Laura Rosenberger Haider
Affiliation: Fresnans Against Fracking and Sierra Club

Priority should be given to on site electric generation since it is most efficient in reducing GHGs with least leakage. Incentives for this would be best. It will balance out the times when there's less solar power input to the electric grid.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:22:20

No Duplicates.

Comment 2 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Follow up on local impacts
Comment:

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[The following comment or question was submitted by email during
the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Phoebe Seaton
Affiliation: Leadership Counsel for Justice and Accountability

Just wanted to follow up on those last comments to ensure that work
should include the potential impacts of digesters and other
technologies on air / water quality and criteria and toxic
emissions.
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 3 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Deliverable #2 Regarding "Pipeline Injected Biomethane"
Comment:

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[The following comment or question was submitted by email during
the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Johannes D. Escudero
Affiliation: Coalition for Renewable Natural Gas

We have less than 7 years to take advantage of the value of State
LCFS carbon credits generated when renewable natural gas derived
from dairy manure is used in CNG/LNG transportation applications.
Once SB 1383 takes full effect in January 1, 2024 one of the value
adders associated with dairy manure sourced RNG will be removed
(since methane from dairy will be required and no longer
voluntary).
We also agree with including biogas (dairy manure)-derived
renewable hydrogen.
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 4 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: RE: Deliverable #2 Regarding "Pipeline Injected Biomethane"
Comment:

[The following comment or question was submitted by email during the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Johannes D. Escudero
Affiliation: Coalition for Renewable Natural Gas

Responding to Michael Boccadoro's reply to our comments -
Just want to clarify that
1) we agree that Jan 1, 2024 is not a foregone conclusion - but we should also not assume that we will have more time; and
2) RNG projects require an average of $16 million investment per project. IF we have 7 years before SB 1383 takes full effect, and considering it typically takes 7-10 years to amortize the investment capital on an RNG project,
we need to do everything we can to encourage and enable the development of as many RNG projects from the dairy sector as soon as possible.
The ARB Greet Model/CI score and related LCFS value currently attributed to dairy-manure sourced RNG is necessary in order for dairy manure-derived RNG projects to pencil out.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 5 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Natural Gas Fuel Markets
Comment:

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[The following comment or question was submitted by email during
the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Obi Ofoegbu
Affiliation: ampCNG

Can we include natural gas utility feedback to the bullet points as
the utility still remain an interesting barrier to entry for CNG as
well as RNG.

Thanks.
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 6 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Renewable Hydrogen Comment
Comment:

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[The following comment or question was submitted by email during
the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Thomas Lawson
Affiliation: California Natural Gas Vehicle Coalition

I second the suggestion to make a separate bullet point. We think
it's really important.
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 7 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Work Plan Deliverables
Comment:

[The following comment or question was submitted by email during the June 26, 2017 Subgroup #2 Kickoff Meeting]

From: Marvin Mears
Affiliation: Environmental Products & Technologies Corporation

To Whom It May Concern

Participated in the web broadcast this morning. The Deliverables ‐ Number 2 is not possible at this time. PG&E and So Cal Gas have authored two Rules that must be complied with in‐order to inject RNG into the pipeline. The developer can not comply with the Rules. Both companies are a monopoly and a digester project is a nuisance. RNG as a transportation fuel is possible with delivery via tube trailers, but not by direct injection. There is a second problem with injection, the pipelines have no capacity to transport additional CNG/RNG. There was discussion about co‐digestion which is easy to say but may be hard to do. This could immediately impact in a negative way the zoning of the dairy and also increase the traﬃc to and from the dairy. Last but not least is there is a good possibility that the dairyman will not allow the digester eﬄuent to be used as irrigation water.

The focus of this group should be to provide incentives and support for developers not dairies who do not have the skills or the ability to raise the funds to build a digester. The dairy's bank or accountant do not support this type of activity, which is a big distraction to their primary business, milking cows and delivering calves.

Regards

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-07-12 14:35:59

No Duplicates.

Comment 8 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Economic Benefits of Projects
Comment:

[The following comment was submitted via email during December 13, 2017 Subgroup #2 meeting]

From: Nina Kapoor
Affiliation: Coalition for Renewable Natural Gas

Comment:
Following up on the comments regarding local economic impacts, my organization released a study earlier this year that found that deploying trucks powered by RNG could create as many as 130,000 new jobs in California and add $14 billion to the state's economy by 2030. We would encourage everyone in the group to read it here:

https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/59077544ebbd1ad192d13ff6/1493660998766/ICF_RNG+Jobs+Study_FINAL+with+infographic.pdf

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-12-13 15:09:13

No Duplicates.

Comment 9 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Question Regarding Vehicle Supply
Comment:

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[The following was a question submitted by email at the
December 13, 2017 Subgroup #2 Meeting]

From: Nina Kapoor
Affiliation: Coalition for Renewable Natural Gas

Comment:
The CEC mentioned the cost differential for a CNG vehicle is
between $15-70k.

ARB has proposed only $40k vouchers under the HVIP program going
forward.

If vehicle supply is critical to making this market work, will ARB
correct the voucher amount?
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-12-15 14:33:42

No Duplicates.

Comment 10 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Digester Funding for All Size Dairies
Comment:

[The following was a comment submitted via email during the December 13, 2017 subgroup #2 meeting]

From: Lynne McBride
Affiliation: California Dairy Campaign

Our organization believes it is critically important to ensure that dairies of all sizes have access to public dairy digester funding and urges that a greater focus is placed on the importance of clustering digester projects to encompass average size dairy operations. The average herd size in CA as of 2016 was 1249 cows per dairy and yet public digester funding has not been made available to dairies of this size. We understand that dairy digester developers are most interested in funding larger scale projects. However, in terms of public policy, we think it is important for public funds to be made available to average size dairy operations. If the public digester funding trend continues, it could dramatically alter the economic landscape for average size dairy operations. Also as CA seeks to be a leader in this area across the country and the world, it is important to demonstrate that dairy digester projects are feasible for dairies of all sizes.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2017-12-18 15:37:33

No Duplicates.

Comment 11 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Comment on CI Scores and the Draft Dairy Crediting Guidance Document
Comment:

[The following is a comment/question submitted to CARB related to dairy topics under consideration and discussion by the agency and the dairy/livestock subgroup #2.]

From: David DeVooght
Affiliation: Amerex Energy

Comment: We are working with a number of companies that are planning on utilizing RNG from dairy digester projects that have already registered as CCO projects. These facilities will be converting from electricity to pipeline quality RNG, and ultimately sending this to California to generate LCFS credits.

Based on the CARB released regulatory guidance for digesters, projects that generate LCFS credits from avoided methane will be required to follow the CARB Livestock Protocol. The CARB Protocol allows for a 10 year crediting period for CCOs.

My question is, if an existing CCO producing livestock digester registers with the LCFS and is awarded a (approx.) -200 CI score that includes avoided methane emissions, does the 10 year crediting period for the CI score apply?

For example, if there is a project that registered and started producing CCOs in 2015 and begins sending RNG to California generating LCFS credits in 2020, does this project only receive LCFS methane avoidance credits for an additional 5 years (2020-2025)?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-03-26 11:04:04

No Duplicates.

Comment 12 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Kevin
Last Name: Hamilton
Email Address: kevin.hamilton@centralcalasthma.org
Affiliation: Central California Asthma Collaborative

Subject: Financing mechinism
Comment:

Regarding definitions of terms used in the financial modeling presentation. Please let me know if this is accurate.
"A Project would consist of either a single large operation with 5,000 or more cows or, more than one dairy in the form of a cluster or group of dairies, tied to a single conditioning, storage and transfer facility.

I ask this as I am concerned for the smaller operations and how they would be included in this grand scheme. If the "cluster" definition is correct then the composition of the cluster would need to be better defined to be inclusive of single ownership smaller operations verses all the cluster facilities being part of a single corporate owner. Perhaps that's already baked in. If so please let me know.

Additionally, we need to bring the results of SB 1383 Pilot Financial Mechanism meeting to the next subgroup-2 meeting including the estimated 10 year financial commitment the state would be taking on under various scenarios and the required policy and regulatory actions needed to mover forward under each.I would recommend relevant agency staff from the Department of Treasury, CEC and CDFA financing specialist who might supervise any adopted financing model be present for Q&A.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2018-06-29 12:13:57

No Duplicates.

Comment 13 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Rebecca
Last Name: Boudreaux
Email Address: rebecca@oberonfuels.com
Affiliation: Oberon Fuels

Subject: Pilot Financial Mechanism - Administrative Credit Support
Comment:

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To Whom It May Concern:

Please find attached another option, Administrative Credit Support,
for consideration in drafting a pilot financial mechanism.

We look forward to continuing the discussions about this topic.

All the best,
Rebecca Boudreaux, Ph.D.
President, Oberon Fuels

On behalf of the team at Oberon Fuels
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Attachment: www.arb.ca.gov/lists/com-attach/14-dairysubgrp2-ws-UyAFYVxsBGQAPgEy.pdf

Original File Name: SB1383 Pilot Financial Mechanism - Administrative Credit Support.pdf

Date and Time Comment Was Submitted: 2018-07-23 14:18:34

No Duplicates.

Comment 14 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Sal
Last Name: Caro
Email Address: salcaro2@outlook.com
Affiliation: None

Subject: Better methane to capture and convert methane into electronic power
Comment:

An advanced methane and ammonia recovery system to capture and process methane from diary cows to reduce the greenhouse gasses which are presently exhausted into the environment. instead converting the methane into electrical power. The system includes a gas recovery system.
The methane and ammonia recovery system captures ammonia and methane and converts the ammonia into fertilizer and methane into energy. The system is designed to substantially reduce the amount of greenhouse gases introduced into the environment, while providing electrical power for the dairy.
Most of the methane produced by dairy cows comes from their month, not their back-end. This system coupled with a good manure management system could reduce the amount of methane introduced into the environment by diaries by over 85%.

Attachment: www.arb.ca.gov/lists/com-attach/15-dairysubgrp2-ws-WytdOlciBTMKYgJ2.pdf

Original File Name: Patent US20080289493 - Advanced Methane and Ammonia Recovery System.pdf

Date and Time Comment Was Submitted: 2018-08-24 16:02:16

No Duplicates.

Comment 15 for Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) - 1st Workshop.

First Name: Joshua
Last Name: Kim
Email Address: joshua.kim@arb.ca.gov
Affiliation:

Subject: Comments on SB1383 Pilot Financial Mechanism
Comment:

[This comment was submitted to CARB and has been uploaded by CARB staff on behalf of the entity identified below.]

Name: California BioEnergy
Date: 9-13-18
Subject: Comments on SB1383 Pilot Financial Mechanism

Dear Mr. Wade:
[Sam Wade, Transportation Fuels Branch Chief, CARB]

California Bioenergy LLC appreciates the work ARB has done in developing a conceptual pilot financial mechanism ("FM") to reduce the economic uncertainty associated with the value of LCFS credits. We want to thank you for the opportunity to submit comments and to work with you and other stakeholders to craft a successful program.

As discussed, a FM is critical to bring in nonrecourse debt. Banks we anticipate, based on historic discussions, will not accept the revenue risks of the LCFS and RIN programs. A financial mechanism, with a floor price in excess of established debt service coverage ratios solves this problem.

Since interest rates for debt are substantially lower than the returns sought by equity, the levels needed for the FM floor price are lowered. An ability to fund a project substantially with debt will also increase the number of projects that are developed, since project developers will need to raise a lower amount of equity capital. This will be important for both dairy and nondairy projects. To be direct, it will also mean a greater portion of project returns will go to project owners and farmers (for us project owners and farmers are combined) versus leaving the community. It will also result in greater project control by these entities, who will be hands on and likely the best to management them.

Another key role of a FM is to ensure long-term project operations. As studied, in the dairy sector the LCFS and RIN credit programs account for approximately 95% of current revenues. A precipitous drop could put operating projects at risk. Traditional equity investors will close down a project that is no longer financially viable. With substantial state financial contributions and given the climate goals and urgency, it is key to build projects that will remain operating for decades.

Thus it would be best to have a FM in place for many years. It is important to point out that the level of the FM floor price goes down over time. First the FM should be high enough to pay off debt and equity (which will be a smaller amount with a debt contribution). However, once debt is paid off the FM floor price simply needs to exceed operating costs (including necessary ongoing capital reinvestments to secure long-term operations).

As a result, we suggest the proposal to end the program after ten years is modified. It may have two or three stages: a floor price during a ten-year debt term and a price after the debt term. A modification may be a floor price for the first five years (helping secure an equity return), followed by a five-year period to pay off the balance of debt, followed by a second ten-year lower floor rate to cover operating costs.

Under a confidentiality agreement if ARB is interested we are pleased to disclose our estimates of O&M costs, debt service, capital reinvestments, and other relevant costs. We suspect competitors will similarly be comfortable sharing these numbers.

Based on our internal discussions after our call we have a handful of suggestions of next steps. To increase the chance that a program is developed, we think it would be very helpful for ARB to make a recommendation on the program approach. To get to that point for the dairy pilot FM we would suggest a small, focused working group with a handful of developers. We have worked constructively with competitors on this topic and other topics and believe all parties would benefit.

A few key CalBio recommendations follow.

1. We support the inclusion of RINs in the FM as well as the price of natural gas. RINs contribute substantially to project success. This inclusion should greatly decrease the likelihood of falling below the FM floor price as long as the RIN program continues.

2. A creative proposal was put forward to turn to private insurers to provide guarantees following an initial level of guarantee from the state. An advantage of a FM working group would be to enter into discussions with private insurers and see if it is available. Per AJW's analysis, this may greatly decrease the annual capital allocations by the state.

3. ARB suggested three state agencies to administer the program: the State Treasurer (CPFTA or CAEATFA), CEC, and CDFA. (ARB excluded itself based on a concern over a potential conflict of interest.) We would recommend ARB selecting the agency and having them as part of the focused working group. This agency could take on such roles as running multiple estimates of the costs to the state based on different approaches and securing proposals from private insurers. The team will need good modeling resources.

4. The CfD and put option proposals are potentially complex programs. It would be terrific if we could simplify the approach at least for the dairy sector. At this point we recommend an option/insurance approach. In addition, knowing the strike price (floor price) and option/premium cost each year, may make it easier both to enter into and to manage the program.

5. We would very likely be willing to pay an annual cost for participation in a program. Our willingness to pay will of course reflect the cost and the floor price/insurance guarantee. We may also want to look at an upfront annual cost and potentially a second payment after year end if the credit prices exceed a certain level - thereby furthering the reserves in the state coffers. The project owner would have an annual commitment, and we would suggest that the owner doesn't have the ability to cancel participation based on market conditions. This will decrease the upfront costs and may increase the total amounts brought in by the state. The annual commitment will also help secure long-term project operations.

6. There is a focus in the white paper on competitive solicitations to get to the most economic price. Given the absence of experience, project owners will only have estimates based on financial models. It may be best to review economics with multiple developers and set

a pricing program. It would be a mistake to have program pricing based on poorly thought out modeling or aggressive bets.

7. It is very important for a project to know it will be able to secure access to the FM. This in turn enables the developer to bring in bank, equity, grants - in other words to complete the capital formation. Needing to enter a competitive solicitation could slow development down substantially. It would be ideal for projects that have reached a certain level of project readiness, to be able to enter a queue and know that they will have access to the program until allocated funds have run out.

8. The level of project readiness needs to be defined to prevent projects that are not substantially advanced from holding back viable projects. This would be a good topic for various parties to discuss. The importance of the queue and queue rules will also reflect the amount of state funding. For example, (i) entry into the queue may require Lease and Feedstock agreements and advanced permitting; (ii) holding one's place in the queue may reflect start of construction by a certain date and subsequently reaching COD (excluding external delays) by a certain date. An escrow payment may or may not be a helpful component. It could potentially be a prepayment of the first year's premium/option price. An approach similar to one outlined here may make more sense than a fixed two year start date per the ARB presentation. Project owners will want to start as soon as possible (which will be easier for add-ons to existing clusters). Delays beyond two years should be accepted both to accommodate external delays and to decrease bankers' expected conservative approach; we need them to feel certain that good projects will return their capital.

9. The white paper raised the topic of integrating grant winners. This is important if the funding option/insurance price is competitively defined. If it isn't, but rather a fixed price, it will also be important to take grant awards into account based on amount of funds in the FM program. We don't want financed or even built projects to take the available capacity. Built projects should perhaps be limited to participation in the second ten-year period, to help insure long-term project viability.

An important issue that is out of our scope is developing a dairy pilot program that can be expanded for other LCFS credit generating sectors.

We would like to thank ARB staff for the opportunity to comment, and we look forward to working together with you and the broader industry on the financial mechanism and other aspects of the LCFS program.

Sincerely,

Neil Black, President, CalBio

Attachment: www.arb.ca.gov/lists/com-attach/16-dairysubgrp2-ws-B2QAZ1Y7UmNSPQNs.pdf

Original File Name: CalBio_ARB_Financial_Mechanism_Comments_9-13-18.pdf

Date and Time Comment Was Submitted: 2018-09-20 08:43:57

No Duplicates.

There are no comments posted to Dairy Subgroup 2 Comment Docket (for digester projects) (dairysubgrp2-ws) that were presented during the Workshop at this time.