ATTACHMENT 5

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
BEET ENERGY Fresno, CA 93740

Commission Agreement #: ARV 12-033
Invoice Number: 6

Invoice Date: 9/30/2013
Billing Period: 9/1/13 - 9/30/13

INVOICE

Send Invoice to: California Energy Commission
Accounting, MS-2
1516 9th Street
Sacramento, CA 95814

Total Billed $ Amount:	$	~~366,123.91~~ $365,723.91 C.K
Retention $ Amount:	$	9,221.99
Total Adjustment:	$	~~356,901.92~~ 356,501.92
Total to Pay this Invoice:	$	
Total Match this Invoice	$	554,891.34

Please reference the invoice number on your check and send with a copy of this invoice to:

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
Fresno, CA 93740
Attn : Ellen Suryadi

Federal Tax I.D.: 27-4590089

Contractor/Recipient Project Manager: James Tischer
Telephone No.: 559-260-6148
Commission Agreement Manager, MS No.: Bill Kinney
Telephone No.: 916-654-4774
Project Title: ABC-Mendota Integrated Demonstration Plant

This request for payment consists of:

1) Invoice (Original and 1 Copy)
2) Progress Report(s) for Applicable Period(s) (Original and 1 Copy)
3) Deliverable(s) listed by name & task (Submit to Commission Agreement Manager Electronically)

RECEIVED
NOV 19 2013
ACCOUNTING

RECEIVED
OCT 11 2013
ACCOUNTING

The documents included in this request for payment are true and correct to the best of my knowledge and I, as an agent of [Company Name] have authority to submit this request. I certify that reimbursement for these costs has not and will not be received from any other sources, including but not limited to a Government entity contract, subcontract, or other procurement method.

Signature of Authorized Agent: _____
William Pucheu, General Manager

Date: 9-Oct-13

Easy Energy Systems, Inc.

102 Mill Sureet
PO Box 437
Welcome, MN 56181
PH: 507-728-8214 Fax: 507-728-8523

Invoice

Date	Invoice #
9/3/2013	68

Bill To	Ship To
MENDOTA BIOENERGY, LLC 2911 E. BARSTOW AVE. OF 144 FRESNO, CA 93740	MENDOTA BIOENERGY, LLC 2911 E. BARSTOW AVE. OF 144 FRESNO, CA 93740

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
	BALANCE ON INV...		9/3/2013	UPS		

Quantity	Item Code	Description	Price Each	Amount
1	EZ902500	PRE-DESIGN ENGINEERING INCLUDES ETHANOL PRODUCTION SYSTEM DESIGN AND PLANT DRAWINGS	54,312.00	54,312.00
1	EZ902500	PREPARING MOTOR HP LIST, ENERGY USAGE, AND PROJECT TASK ASSIGNMENTS FOR PLANT PRE-CONSTRUCTION REQUIREMENT'S	10,000.00	10,000.00
1	EZ900120	BEET HAMMER MILL AND GLYCOL HEAT PUMPING SYSTEM CUSTOMER RESPONSIBLE FOR ANY CALIFORNIA SALES TAX IF APPLICABLE	249,192.00	249,192.00

Total $313,504.00

ATTACHMENT 6

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
BEET ENERGY Fresno, CA 93740

Commission Agreement #: ARV 12-033
Invoice Number: 7A

Invoice Date: 10/31/2013
Billing Period: 10/1/13 - 10/31/13

INVOICE

Send Invoice to: California Energy Commission
Accounting, MS-2
1516 9th Street
Sacramento, CA 95814

Total Billed $ Amount:	$	1,561,306.63
Retention $ Amount:	$	10,093.76
Total Adjustment:	$	-
Total to Pay this Invoice:	$	1,551,212.87
Total Match this Invoice	$	1,471,033.52

Please reference the invoice number on your check and send with a copy of this invoice to:

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
Fresno, CA 93740
Attn : Ellen Suryadi

Federal Tax I.D.: 27-4590089

Contractor/Recipient Project Manager: James Tischer
Telephone No.: 559-260-6148
Commission Agreement Manager, MS No.: Bill Kinney
Telephone No.: 916-654-4774
Project Title: ABC-Mendota Integrated Demonstration Plant

This request for payment consists of:

1) Invoice (Original and 1 Copy)
2) Progress Report(s) for Applicable Period(s) (Original and 1 Copy)
3) Deliverable(s) listed by name & task (Submit to Commission Agreement Manager Electronically)

The documents included in this request for payment are true and correct to the best of my knowledge and I, as an agent of [Company Name] have authority to submit this request. I certify that reimbursement for these costs has not and will not be received from any other sources, including but not limited to a Government entity contract, subcontract, or other procurement method.

RECEIVED
JAN 03 2014
ACCOUNTING

RECEIVED
DEC 04 2013
ACCOUNTING

Signature of Authorized Agent: _____
William Pucheu, General Manager

Date: 8-Nov-13

Easy Energy Systems, Inc.

102 Mill Street
PO Box 437
Welcome, MN 56181
PH: 507-728-8214 Fax: 507-728-8523

Invoice

Date	Invoice #
10/15/2013	104

Bill To	Ship To
MENDOTA BIOENERGY, LLC 2911 E. BARSTOW AVE. OF 144 FRESNO, CA 93740	MENDOTA BIOENERGY, LLC 2911 E. BARSTOW AVE. OF 144 FRESNO, CA 93740

P.O. Number	Terms	Rep	Ship	Via	F.O.B.	Project
	BALANCE ON INV...	MG	10/15/2013		FIVE PTS, CA	

Quantity	Item Code	Description	Price Each	Amount
1	EZ900120	BEER / YEAST / CIP /CO2- MODULE = FERMENTATION, CLEANING AND CO2 CAPTURE	520,440.00	520,440.00
1	EZ900120	FERMENT RACKS - MODULE = PROVIDES PUMPS AND CONTROLS FOR FERMENTATION	517,681.00	517,681.00
1	EZ900120	DISTILLATION MODULE – DISTILLS 190 PROOF ETHANOL FROM FERMENTED BEER	775,390.00	775,390.00
1	EZ900120	MOLECULAR SIEVE MODULE = CONVERTS 190 PROOF ETHANOL TO 199+ PROOF	653,329.00	653,329.00
1	EZ900120	COOLING TOWER – PROVIDES COOLING TO FERMENTATION AND CONDENSATION	52,715.00	52,715.00
		CUSTOMER RESPONSIBLE FOR ANY CALIFORNIA SALES TAX IF APPLICABLE.		
		NOTE:		
		NET CASH DUE = $1,460,369.00		
		LOAN ADVANCE FOR MATCH FROM EASY ENERGY SYSTEMS – $1,059,186.00.		

Total $2,519,555.00

ATTACHMENT 7

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
Fresno, CA 93740
559.336.4570

November 21, 2014

Mr. Bill Kinney
Commission Agreement Manager
California Energy Commission
Emerging Fuels & Technology Office
1516 Ninth St., MS 27
Sacramento, CA 95814

RE: CEC Staff ARV 12-033 Document Request Regarding Tasks Transition from Easy Energy Systems to Mendota Bioenergy

Dear Bill,

We are following up on the document request for Mendota Bioenergy's transition into construction and operation responsibilities for the Red Rock Ranch based whole beet to ethanol funded by ARV 12-033. The demonstration plant is an essential step towards the commercial 15 MGY biorefinery.

Briefly stated you requested the following five (5) items plus a technical analysis of the proposed demonstration plant. The requested items follow:

1. A revised project budget to include the $689,285 not yet spent out of Easy Energy's budget, as well as the approximately $1.1 million that Mendota is currently holding on to
2. A revised project timeline for equipment purchase, plant operation, fuel production, etc.
3. Documentation of what the $750,000 to Easy Energy paid for (what milestones were completed), and a list + dollar value of the equipment that Mendota will be taking from Iowa.
4. A revised Scope of Work or confirmation that the Scope of Work will not change
5. A revised timeline / Schedule of Products, as needed.
6. A technical analysis of how the revised plan will perform as necessary to develop sound engineering and operational and economic information required to develop, fund and construct and operate sustainably the first whole beet to 2nd generation commercial 15 MGY biorefinery in the United States.

Mendota Bioenergy, LLC
2911 E. Barstow Ave. OF 144
Fresno, CA 93740
559.336.4570

BEET ENERGY

The information you request is contained in each of the numbered attachments noted below.

We look forward to working closely with you and your colleagues to establish a high comfort level for the successful completion of ARV 12-033 leading to the development a commercial facility.

Cordially,

James R. Tischer

James R Tischer
Project Manager
Mendota Bioenergy, LLC

Attachments

1.0 B. Kinney Instructional Email November 14, 2014
2.0 Mendota Bioenergy Executive Plan Summary
3.0 Exhibit B (Budget) Revised 11.21.2014
4.0 CapEx/OpEx Budget- Revised 11.21.2014
5.0 Easy Energy Systems, ARV 12-033 Use of Funds Documentation 11.08.2014
6.0 Scope of Work Exhibit A-1 Revisions
7.0 Revised Project Timeline/Schedule
8.0 B. Kinney email parsed with answers to specific questions not noted in attachments

Attachment 1.0

Parsed Bill Kinney 11.14.2014 letter with more detailed explanations not contained in individual attachments. Responses indicated thusly >>>>>>>>>>

From: "Kinney, Bill@Energy" <Bill.Kinney@energy.ca.gov>
Subject: RE: CEC - MENDOTA LIAISON MEETING TODAY.
Date: November 14, 2014 4:49:52 PM PST
To: "James R. Tischer" <jtischer@mendotabeetenergy.com>, "Butler, John@Energy" <john.butler@energy.ca.gov>, "John, Elizabeth@Energy" <elizabeth.john@energy.ca.gov>, "Irish, Cory@Energy" <cory.irish@energy.ca.gov>
Cc: Bill Pucheu <pbrincwp@kermantel.net>, John Diener <jedfivepoints@gmail.com>, Ellen Suryadi <esuryadi@csufresno.edu>, "Steve Zicari" <szicari@ucdavis.edu>, Leon Woods III <leon@leonwoods.com>

Jim,

We had some follow-up questions from yesterday, and we wanted to provide a list of what we understood you would be providing us next week. As a clarification to John's referenced statement, time-critical activities meeting immediate needs such as harvesting beets are ok. However, eligible activities would not include expenditures outside of the existing Budget and Scope of Work.

As a further review of the results of the meeting, we understand that you will be providing the following by next Thursday:

1. A revised project budget to include the $689,285 not yet spent out of Easy Energy's budget, as well as the approximately $1.1 million that Mendota is currently holding on to,
   >>>>>***See numbered attachments 3.0 & 4.0***
   Attachment 3.0 indicates the assumption of the remaining EES budget by Mendota.
   Attachment 4.0 displays the revised project execution estimate, which those monies will be expended towards.

2. A revised project timeline for equipment purchase, plant operation, fuel production, etc.,
   >>>>>***See attachment 7.0***

3. Documentation of what the $750,000 to Easy Energy paid for (what milestones were completed), and a list + dollar value of the equipment that Mendota will be taking from Iowa,
   >>>>>>***See attachment 5.0***
   Mendota has discussed a resolution with Easy Energy Systems where EES turns over the engineering, IP and equipment of value to Mendota pending CEC legal input. They are agreeable to negotiate. EES has already shipped Novozyme and Clariant enzymes to Red Rock Ranch for use in the MB demonstration plant.

4. A revised Scope of Work or confirmation that the Scope of Work will not change,
   >>>>>>***See attachment 6.0 - SOW is essentially unchanged on project***

deliverables, however key contractors will need to be adjusted as described herein to effectively assume responsibility for EES task items.

5. A revised timeline / Schedule of Products, as needed.
   >>>>> ***See attachment 7.0***

In addition, we will need a technical analysis of how this revised plan, using mostly used and repurposed equipment in a 'less integrated' package, will satisfy our mutual needs for data that will support evaluating the feasibility of building a commercial-scale beets-to-energy plant in California. In particular, the resulting data will need to convince financing sources of the economic viability of such a venture.

>>>>***Please be mindful that;***

- ***Previous Mendota EPC contractors both specified repurposed (used) or existing equipment to fabricate the demonstration plant. The ARV 12-033 construction budget did not allow for brand new equipment to be utilized for a plant that would operate such a short period of time,***
- ***The key "integrated" feature of the biorefinery applies to the commercial plant with the on-site gasifier, biodiesel facility, wastewater treatment plant and anaerobic digestion facility. The demonstration plant project budget does not allow for all the integrated elements present for the 15 MGY facilities. However the data set from the demonstration plant will enable solid engineering/finance to proceed for those off-the-shelf components,***
- ***We have been in contact with Steve Nichols from USDA-Rural Development, Davis to ensure that our project deliverables align with the financing requirements of USDA Loan Guarantee participating institutions,***
- ***AMEC (Cecil Massie P.E.) who provided Easy Energy's process engineering work will perform a "Fatal Flaws" analysis for Mendota on Phase I and Phase II. AMEC's website is here: http://www.amecfw.com , and***
- ***The major aspect of this project yet reduced to practice unknown in this project is the processing and liquefaction of whole energy beets into fermentable sugars and subsequent critical conversion data sets.***

Key metrics that will be validated with the proposed plant will still remain to include, among others, information on:

- ***Assessment and response to seasonal energy beet feedstock variations,***
- ***Liquifaction performance and enzyme cost metrics,***
- ***Heating and cooling equipment and energy balance performance metrics at scale,***
- ***Fermentation parameter and yield variations,***
- ***Opportunities for process improvement identification and byproduct valuation such as stillage and pulp streams for fertilizer and feedstock values,***

This has not been accomplished before on the scale Mendota will be able to demonstrate at the Red Rock Ranch facility. Clariant in Munich, Germany has only processed 5 metric tons of whole beets to ethanol through their new €30 million ($37,620,000 US) demonstration biorefinery in Straubing. Mendota Bioenergy will convert considerably more tonnage, which is why Clariant sent 50 liters of their new Liquibeet™ enzyme to Red Rock for testing purposes. We feel that the application of the rotary mixing tank design may be scalable for liquefaction at commercial scale or possibly allow a simplified liquefaction and

fermentation solution for smaller distributed plants.

This latest approach to doing the demonstration, while efficient in expediting the completion of the project, does not provide as tidy a design package as the EZ modular approach, or the ground-up design IR1 had proposed. Please give this question some serious thought.
>>>> ***Please be mindful that neither IR1 nor Easy Energy had previous hands-on experience dealing with sizeable quantities of energy beets to advanced ethanol via liquefaction from enzymes. The proposed configuration enables adaptive management to proceed in a controlled environment to generate significant quantities of beet beer for conversion to ethanol.***
Mendota's goal has always been a well-designed, financeable and economically sustainable 15 MGY biorefinery. Actions that detract from that goal are counterproductive.
Unfortunately Easy Energy's marketing was far ahead of its execution capabilities and that in actuality, working through the process design with an additional constraint of having to be modularized added cost and complexity at the 1 MMGY scale and did not scale well to a commercial scale. The key engineering aspects that will be determined are the processing variable conditions (time, temperature, agitation, pH, etc.) that need to be validated for all unit operations, including through distillation. Diversified Ethanol is on the forefront of distillation and dehydration system design and operation (the new $20MM Stan Mayfield Cellulosic Ethanol Biorefinery at the University of Florida has their distillation and dehydration system. Diversified Ethanol just shipped a brand new 500,000 GY system to Australia for use in a small ethanol plant.)
Easy Energy proposed to use equipment used in larger ethanol facilities however with little understanding of how it scaled down for a Mendota-sized demonstration plant.

Finally, please provide more detail / rationale for needing to move the UCD ethanol pilot equipment to Red Rock Ranch, and processing beets by year end. We fully appreciate your commitment to accomplish this, but I think both the Chairman and the Executive Director are more concerned about getting the demonstration plant operational, than trying to meet a deadline for nominal production which is perhaps a distraction from the key deliverables we seek, especially given the new circumstances.
>>>>***The UC Davis Pilot Plant will enable Mendota to convert UC Westside Research and Extension Center beets that have been in the Red Rock Cooler since August into beet beer. The Mendota beet beer will allow Diversified Ethanol Co. to distill and dehydrate into whole beet ethanol. Metrics gained from the Diversified process will be enhanced when the larger rotary fermenters come on line at Red Rock.***
Key benefits of the "immediate pilot plant processing installation follow;

- ***Enable immediate production of beer for further processing by Diversified Ethanol,***
- ***Allow further fine tuning of the distillation and dehydration equipment to enable a reliable run of 60,000 gallons of fuel ethanol to be produced,***
- ***Allow small batches of beets in cold storage to be processed periodically to check whether processing performance changes over time with storage,***
- ***Allow initial testing of some critical components which are useful to design, such as with;***
    - ***Utilization of Clariant Liquibeet enzyme,***
    - ***Rotary fermenter plumbing for semi-continuous and continuous operation, and***
    - ***Beet heating and cooling and heat recovery concepts.***

The end product is ethanol but the most important aspect is the testing of the processes necessary for making that product.

Please do not hesitate to follow up with any questions you may have.
Regards,
Bill

Thank you for your clear guidance and thoughtful comments.

Jim Tischer

Attachment 2.0

Mendota Bioenergy, LLC (MBLLC) Execution Plan Summary **November 13, 2014**

CEC ARV 12-033 Red Rock Ranch (RRR) Beet to Ethanol Demonstration Facility

Construction and operation of a beet ethanol demonstration facility at RRR supports MBLLC development interests as laid out in the ARV 12-033 California Energy Commission (CEC) proposal for conversion of sugar beets to biofuels, including to:

1) Define and reduce uncertainties through engineering, evaluation, and demonstration of key elements,
2) Improve economic, environmental, and social profitability for stakeholders, and
3) Determine commercial scale feasibility

Building on momentum gained from over 7-years of development activity, including successful completion of ARV 10-028 and current work performed under ARV 12-033 that includes agronomic, engineering, and business evaluations with multiple partners and vendors, MBLLC has assembled an execution plan to achieve ARV 12-033 objectives within budget and with minimized schedule impact. Most elements previously described for ARV 12-033 execution remain unchanged, however lack of performance by a key sub-contractor requires rapid transition to assuming implementation responsibilities. Key supporting contractors include:

- AMEC Power and Process Americas (AMEC) - Engineering
- Fuel and Power Logistics (FPL) – Procurement, Construction, Operations
- Diversified Ethanol/Greenbelt Resources (DE/GR) - Operations

<u>Key revised elements of the plan are to:</u>

- Harvest and store existing ~800+ tons of energy beets in cold storage at RRR.
- Install a temporary processing line using existing MBLLC and UC Davis equipment to begin processing some beets to beer immediately. Distillation and dehydration of ethanol will be performed in cooperation with DE/GR at their Paso Robles, CA demonstration facility using novel distillation and membrane dehydration technology.
  - Schedule: In progress and complete by end of 2014.
- Complete facility design, procure, and install new and primarily used hardware, importantly including 4 twenty+ ton re-purposed rotary wine fermenters and ancillary equipment, to complete the RRR demo plant fermentation facility. Approximately 200 tons per month of beets will be processed to beer at RRR, transferred to DE/GR for distillation/dehydration and production of roughly 5000 gallons of fuel ethanol per month.
  - Schedule: In progress. Completing engineering with AMEC and local engineers, identifying and completing procurement activities. Target is fully operational by end of February 2014.
- See Basis-of-Design document and Gantt chart (rev. Oct 28, 2014) for additional details.

EXHIBIT B
Exh B-1a Task Summary

	Summary Task Budget	~~Prime Recipient Reimbursable Costs~~	Prime Recipient Reimbursable Costs	~~Major Subcontractor #1 Reimbursable Costs~~	Major Subcontractor # 1 Reimbursable Costs	Major Subcontractor #2 Reimbursable Costs	Major Subcontractor #3 Reimbursable Costs	Major Subcontractor #4 Reimbursable Costs	Major Subcontractor #5 Reimbursable Costs	Commission Reimbursable Costs	Match Funding	Totals
		~~Mendota Bioenergy, LLC~~	Mendota Bioenergy, LLC	~~Easy Energy Systems, Inc~~	Easy Energy Systems, Inc	University of California, Davis	California State University, Fresno	Red Rock Ranch, Inc.	JAL Engineering			
)	Administration	~~$ 82,672~~	$ 83,785	~~$ 1,113~~	$ -	$ 16,004	$ 6,715	$ 4,366		$ 110,870		~~$ 251,931~~
)	Energy Beet Production	$ 491,916	$ 491,916	$ -		$ 25,000	$ 188,402	$ -		$ 655,318		$ 1,116,035
)	Design Phase	$ -		$ 24,312	$ 24,312	$ -	$ -	$ 7,081		$ 31,393		$ 1,127,428
)	Pre-Construction	$ 50,815	$ 50,815	$ 10,000	$ 10,000	$ -	$ -	$ 6,131	$ 129,921	$ 196,867	$ 82,015	$ 278,882
)	Construction	$ -	$ 429,814	$ 2,139,375	$ 1,709,561	$ 24,000	$ -	$ 13,212		$ 2,176,587		$ 5,247,579
0	Plant Operations	$ 506,373	$ 668,405	$ 106,032	$ 34,000	$ 267,401	$ 50,000	$ 108,934	$ 52,500	$ 1,181,240	$ 1,225,897	$ 2,407,137
0	Biofuels Development Analysis	$ -		$ -		$ 197,734	$ 62,153	$ -		$ 259,887		$ 331,482
0	Coordination & Management	$ 197,578	$ 293,904	$ 96,326	$ -	$ -	$ 7,000	$ 20,393	$ 26,250	$ 347,547	$ 351,452	$ 698,999
0	Data Collection & Analysis	$ -		$ -		$ 26,344	$ 6,215	$ 6,131		$ 38,690		$ 134,650
	Grand Totals	~~$ 1,329,354~~	$ 2,018,639	~~$ 2,467,158~~	$ 1,777,873	$ 556,483	$ 270,485	$ 166,248	$ 208,671	$ 4,598,399	$ 5,595,724	$ 11,594,123

hese boxes, be sure to include all costs: labor (unloaded rates) and non-labor costs (fringe, overhead, general & administrative, and other direct operating costs). The totals are total costs to perform each

EXHIBIT B
Exh B-1b Category Summary

Summary Category Budget	~~Prime Recipient Reimbursable Costs~~	Prime Recipient Reimbursable Costs	~~Major Subcontractor #1 Reimbursable Costs~~	Major Subcontractor #1 Reimbursable Costs	Major Subcontractor #2 Reimbursable Costs	Major Subcontractor #3 Reimbursable Costs	Major Subcontractor #4 Reimbursable Costs
	~~Mendota Bioenergy, LLC~~	Mendota Bioenergy, LLC	~~Easy Enery Systems, Inc.~~	Easy Enery Systems, Inc.	University of California, Davis	California State University, Fresno	Red Rock Ranch, Inc
Direct Labor	$ 107,950				$ 206,799	$ 63,759	$ 42,651
Fringe Benefits	$ 22,738				$ 47,770	$ 27,028	$ 10,663
Travel						$ -	
Equipment	~~$ 115,000~~	~~$ 544,814~~	~~$ 2,163,687~~	~~$ 1,733,873~~		$ -	$ 95,937
Materials/ Misc.	~~$ 655,757~~	~~$ 831,128~~	~~$ 215,371~~	~~$ 40,000~~	~~$ 200,775~~	~~$ 146,180~~	$ -
Minor Subcontractors*	$ 398,347					$ -	$ -
Total Direct	~~$ 1,299,792~~	~~$ 1,904,977~~	~~$ 2,379,058~~	~~$ 1,773,873~~	~~$ 455,344~~	~~$ 236,967~~	~~$ 149,251~~
Indirect Overhead					$ 101,139	$ 33,518	$ 7,997
General & Administrative	~~$ 29,562~~	~~$ 113,662~~	~~$ 88,100~~	~~$ 4,000~~		$ -	$ 9,000
Total Indirect	~~$ 29,562~~	~~$ 113,662~~	~~$ 88,100~~	~~$ 4,000~~	~~$ 101,139~~	~~$ 33,518~~	~~$ 16,997~~
Grand Total	~~$ 1,329,354~~	~~$ 2,018,639~~	~~$ 2,467,158~~	~~$ 1,777,873~~	~~$ 556,483~~	~~$ 270,485~~	~~$ 166,248~~

Direct Labor = unloaded rates X number of hours (Att B-3)

* A Minor Subcontractor is any subcontractor receiving less than $100,000 or 25% (whichever is less) of the Commission Funds.

EXHIBIT B
Exh B-1b Category Summary

Summary Category Budget	Major Subcontractor #5 Reimbursable Costs JAL Engineering	Totals
Direct Labor	$ 155,937	$ 577,096
Fringe Benefits	$ 39,234	$ 147,433
Travel		$ -
Equipment		$ 2,374,624
Materials/ Misc.		$ 1,218,083
Minor Subcontractors*		$ 398,347
Total Direct	$ 195,171	$ 4,715,583
Indirect Overhead	$ 13,500	$ 156,154
General & Administrative		$ 126,662
Total Indirect	$ 13,500	$ 282,816
Grand Total	$ 208,671	$ 4,998,399

Direct Labor = unloaded rate

* A Minor Subcontractor is ar

EXHIBIT B
Exh B-4 Direct Operating Expenses

			Equipment**				
Task No.	cost incurred by	cost incurred by	Description	Unit Cost	~~Amount Commission Funds~~	Amount Commission Funds	Match Funds
2	Recipient		Infrared Sugar Sampler	$ 15,000.00	$ 15,000.00		
2	Recipient		Energy Beet Harvesters	$ 36,000.00	$ -		$ 38,900.00
2	Recipient		Cross RHINO beet washer	$ 150,000.00	$ 100,000.00		$ 75,000.00
3	Sub1 - EES		Design Engineering	$ 24,312.00	$ 24,312.00		$ 1,084,591.00
5	Sub1 - EES		Glycol Heat System - Module	$ 144,692.00	$ 144,692.00		
5	~~Sub1 - EES~~	**Recipient**	Beet Front End Processing - Module	$ 134,500.00	~~$ 134,500.00~~	**$ 30,000.00**	
5	~~Sub1 - EES~~	**Recipient**	Beet/Yeast/CIP/CO2 - Module	$ 520,440.00	~~$ 301,657.00~~	**$ 100.00**	$ 218,783.00
5	Sub1 - EES		Ferment Racks - Module	$ 517,681.00	$ 300,058.00		$ 217,623.00
5	Sub1 - EES		Distillation Module	$ 775,390.00	$ 449,526.00		$ 325,964.00
5	Sub1 - EES		Molecular Module	$ 653,329.00	$ 378,674.00		$ 274,655.00
5	Sub1 - EES		Cooling Tower - Module	$ 52,715.00	$ 30,554.00		$ 22,161.00
5	~~Sub1 - EES~~	**Recipient**	Ferment and Beer Tanks - Module	$ 71,299.50	~~$ 25,280.00~~	**$ 25,280.00**	$ 545,116.00
5	~~Sub1 - EES~~	**Recipient**	Liquerfaction/Pretreatment - Module	$ 570,396.00	~~$ 258,436.00~~	**$ 258,436.00**	$ 18,898.00
5	~~Sub1 - EES~~	**Recipient**	Construction	$ 125,458.00	~~$ 115,998.00~~	**$ 115,998.00**	
					$ 2,163,687.00		
6	Sub2-UCD		Pilot Biogas Plant	$ 262,500.00	$ -		$ 262,500.00
2	Sub3-CSUF		Drip Irrigation	$ 35,000.00	$ -		$ 35,000.00
6	Sub4- RRR		Insta-Pro Seed Crusher Plant	$ 150,000.00	$ -		$ 150,000.00
6	Sub4- RRR		BIODICO Biodiesel Plant	$ 150,000.00	$ -		$ 150,000.00
6	Sub4- RRR		Biodiesel Transfer Pumps & Related		$ 95,937.00		
					$ 2,374,624.00		**$ 3,419,191.00**

** Equipment is defined as having an acquisition unit cost of at least

EXHIBIT B
Exh B-5 Match Funding

Task Match Funding Budget		Prime Contractor Match Contribution	Major Subcontractor #1 Match Contribution	Major Subcontractor #2 Match Contribution	Major Subcontractor #3 Match Contribution	Major Subcontractor #4 Match Contribution	Major Subcontractor # 5 Match Contribution	Match Funding
		Mendota Bioenergy, LLC	Easy Energy Systems, Inc	University of California, Davis	California State University, Fresno	Red Rock Ranch, Inc.	JAL Engineering	
1.0	Administration	$ 94,099	$ 35,058	$ 3,274	$ 2,576	$ 6,054		$ 141,061
2.0	Energy Beet Production	$ 239,105	$ -	$ -	$ 221,612	$ -		$ 460,717
3.0	Design Phase	$ -	$ 1,084,591	$ -	$ -	$ 11,444		$ 1,096,035
4.0	Pre-Construction	$ 3,500	$ 52,728	$ -	$ -	$ 11,349	$ 14,438	$ 82,015
5.0	Construction	$ -	$ 1,623,200	$ -	$ -	$ 1,447,793		$ 3,070,992
6.0	Plant Operations	$ 77,792	$ 351,639	$ 275,594	$ 166,000	$ 325,997	$ 28,875	$ 1,225,897
7.0	Biofuels Development Analysis	$ -	$ -	$ 45,830	$ 25,765	$ -		$ 71,595
8.0	Coordination & Management	$ 209,157	$ 82,861	$ -	$ -	$ 44,997	$ 14,438	$ 351,452
9.0	Data Collection & Analysis	$ 44,275	$ 34,486	$ 3,274	$ 2,576	$ 11,349		$ 96,960
	Grand Totals	**$ 667,927**	**$ 3,264,563**	**$ 327,972**	**$ 418,529**	**$ 1,858,983**	**$ 57,750**	**$ 6,595,724**

Invoice Tracker for Mendota Project

Invoice#	Date	Customer Name	Amount	Column1
40032969-A	4/7/2014	Andritz	$ 55,260.00	conditioner
001-17644	4/7/2014	Amec	$ 4,674.50	engineering
002-17644	5/8/2014	Amec	$ 11,507.50	engineering
003-17644	6/16/2014	Amec	$ 8,035.00	engineering
GMI-181236	6/18/2014	Guy Metal	$ 6,612.50	stainless
181210/231	6/18/2014	Guy Metal	$ 10,956.04	stainless
40210	6/23/2014	Zeochem, LLC	$ 500.00	supplies for test
400412 SE	6/24/2014	Guy Metal	$ 6,612.50	stainless
64343	6/25/2014	Baarts Trucking	$ 1,510.00	reefer rental
400418 SE	6/27/2014	TW Metals	$ 1,133.04	tubing
main fuel train	7/8/2014	Phoenix Oil Heater	$ 109,900.00	oil heater
SG1483	7/10/2014	Surplus Group, LLC	$ 36,800.00	cooling tower
SG1483	7/10/2014	Surplus Group, LLC	$ 385.00	cooling tower
004-176444	7/15/2014	Amec	$ 16,046.50	engineering
3155889	7/16/2014	Baldwin	$ 167.01	gearboxes
3156475	7/18/2014	Baldwin	$ 4,013.19	gearboxes
3536	7/21/2014	M&G Services	$ 8,721.00	assmbly labor
3538	7/21/2014	M&G Services	$ 668.57	assembly labor
400435SE	7/22/2014	Rode Manufacturing	$ 347.50	shafts machining
3157105	7/22/2014	Baldwin	$ 1,759.71	gearboxes
20835	7/25/2014	Vincent Shredder	$ 500.00	shredder rental
7/26/2014	7/26/2014	Kim Rock	$ 90.00	
/28/2014	7/28/2014	Casey's	$ 250.35	fuel for reefer
3544	7/28/2014	M&G Services	$ 671.44	assmebly labor
3542	7/28/2014	M&G Services	$ 207.00	assembly labor
3543	7/28/2014	M&G Services	$ 2,566.00	assembly labor
01641260	7/31/2014	McNeilus Steel	$ 1,270.64	steel for frames
123129	7/31/2014	Ruthven Coop Oil	$ 109.84	oil for reefer
3556	8/4/2014	M&G Services	$ 3,050.50	assembly labor
	8/5/2014	Casey's	$ 206.43	fuel for reefer
01643699	8/5/2014	McNeilus Steel	$ 4,281.90	steel for frames
3557	8/7/2014	M&G Services	$ 3,279.29	assembly labor
40762	8/8/2014	Pritts Electric Motors	$ 277.00	motors
94938669	8/8/2014	McMaster Carr	$ 94.35	misc
01646001	8/8/2014	McNeilus Steel	$ 4,893.60	steel for frames
	8/9/2014	Jason Hugie	$ 50.00	
	8/9/2014	Kim Rock	$ 121.91	
005-17644	8/12/2014	Amec	$ 17,872.43	engineering labor
	8/13/2014	Casey's	$ 201.67	fuel for reefer
	8/13/2014	Casey's	$ 198.90	fuel for reefer
3571	8/13/2014	M&G Services	$ 12,230.25	assembly labor
3573	8/13/2014	M&G Services	$ 190.70	assembly labor
01647912	8/14/2014	McNeilus Steel	$ 648.00	steel for frames
01647028	8/14/2014	McNeilus Steel	$ 445.20	steel for frames
01649109	8/15/2014	McNeilus Steel	$ 430.59	steel for frames
163720	8/16/2014	McNichols Company	$ 3,385.06	
3579	8/18/2014	M&G Services	$ 2,604.00	assembly labor
29607	8/19/2014	Easy Automation	$ 9,115.54	assebly labor

16185	8/20/2014	Tim Meyer	$	83.70	rv expenses
	8/21/2014	Casey's	$	258.88	fuel for reefer
9628	8/21/2014	Easy Automation	$	6,668.08	assembly labor
29632	8/21/2014	Easy Automation	$	3,412.21	assembly labor
01651150	8/22/2014	McNeilus Steel	$	915.26	steel for frames
29635	8/22/2014	Easy Automation	$	2,400.00	assembly labor
	8/25/2014	Casey's	$	209.85	fuel for reefer
3585	8/25/2014	M&G Services	$	2,815.00	assembly labor
3586	8/25/2014	M&G Services	$	4,988.00	assembly labor
29656	8/26/2014	Easy Automation	$	2,948.98	assembly labor
29659	8/26/2014	Easy Automation	$	10,142.18	assembly labor and weigh scale parts
01653392	8/27/2014	McNeilus Steel	$	261.50	steel for frames
020968	8/27/2014	Vincent Shredder	$	1,000.00	shredder rental
13063481-00	9/2/2014	Building Fasteners	$	323.51	bolts and nuts
	9/3/2014	Casey's	$	338.80	fuel for reefer
	9/3/2013	Casey's	$	265.81	fuel for reefer
3607	9/3/2014	M&G Services	$	522.00	assembly labor
3608	9/3/2014	M&G Services	$	6,588.50	assembly labor
	9/5/2014	Tim Meyer	$	2,500.00	rv rental
01653764	9/5/2014	McNeilus Steel	$	90.81	steel for frames
3612	9/5/2014	M&G Services	$	2,813.00	assembly labor
	9/8/2014	Casey's	$	214.81	fuel for reefer
006-176444	9/12/2014	Amec	$	16,707.50	engineering
S100746409.001	9/12/2014	J.H. Larson	$	626.55	mounting struts
	9/15/2014	Tim Meyer	$	2,500.00	rv rental
01659737	9/15/2014	McNeilus Steel	$	909.63	assembly labor
10995	9/16/2014	Service Master	$	80.16	
	9/17/2014	Jake Korte	$	100.00	
24069	9/17/2014	Clean Co	$	6,778.46	steam boiler rental
24070	9/18/2014	Clean Co	$	6,505.25	steam boiler rental
24071	9/19/2014	Clean Co	$	2,835.00	steam boiler rental
24702	9/19/2014	Clean Co	$	8,639.45	steam boiler rental
	9/23/2014	Clean Co	$	433.75	steam boiler rental
16246	9/25/2014	Tim Meyer	$	1,156.13	fuel for RV
021094	9/25/2014	Vincent Shredder	$	1,000.00	shredder rental
SEP14062	9/30/2014	Brown Engineering Co	$	325.00	
66819	10/3/2014	Baarts Trucking	$	2,952.50	reefer rental
4394	10/9/2014	CMS Heat Transfer	$	11,270.00	tubesheet for reboiler
007-176444	10/14/2014	Amec	$	5,925.00	engineering
1/2 Dumpster		Shamrock	$	4,110.99	beet disposal
Total			$	477,468.40	

MARKS NUMBERS
Expenses
Wages related to Mendota Project

	2014	
January		$16,355.77
Feburary		$19,917.73
March		$25,475.28
April		$19,294.35
May		$23,938.85
June		$29,310.75
July		$30,655.13
August		$81,882.48
September		$84,284.53
October		$48,627.62
	Total Wages	$379,742.49

Selling expense and project solutions engineering for 2013 $158,152.18

Selling expense and project solutions engineering for 2012 $82,592.46

Total Wages AND SELLING EXPENSE AND PROJECT SOLUTIONS ENGINEERING>>>

Total Travel Expenses for Mark Gaalswyk to CA

Total Parts and Supplies and Engineering

50% of overhead for 12 montsh

Prof liability	$	17,365.10
General Liability Increases	$	20,184.85
Pollution Insurance	$	17,793.00
Genreal Liability	$	3,496.00
Total Insurance Costs		

Their Total

Total with travel too

My notes Nov 18 2014

Perhaps CEC $'s to...

$23,938.85
$29,310.75
$30,655.13
$81,882.48
$84,284.53
$48,627.62

$620,487.13

$8,884.00 $8,884.00

$477,468.40 (Approx. excludes remainder on equipment payments $350,000 due after default)

$172,133 $86,066.50 6 months, not 12

$ 58,838.95

$ 1,328,927.48 (they forgot to include the $8884.00 travel expenses for Mark)

$ 1,337,811.48 $ 743,649.86 Total Expenditure...$750K
$ 594,161.62 Remaining useful as Match?

Invoice #	Date	Customer Name	Amount	Column1	SZ Notes
001-17644	4/7/2014	Amec	$4,674.50	engineering	
002-17644	5/8/2014	Amec	$11,507.50	engineering	
003-17644	6/16/2014	Amec	$8,035.00	engineering	
004-176444	7/15/2014	Amec	$16,046.50	engineering	
005-17644	8/12/2014	Amec	$17,872.43	engineering labor	
006-176444	9/12/2014	Amec	$16,707.50	engineering	
007-176444	10/14/2014	Amec	$5,925.00	engineering	AMEC $80K total
40032969-A	4/7/2014	Andritz	$55,260.00	conditioner	Includes HP Steam Controls...
64343	6/25/2014	Baarts Trucking	$1,510.00	reefer rental	
66819	10/3/2014	Baarts Trucking	$2,952.50	reefer rental	
3155889	7/16/2014	Baldwin	$167.01	gearboxes	
3156475	7/18/2014	Baldwin	$4,013.19	gearboxes	
3157105	7/22/2014	Baldwin	$1,759.71	gearboxes	$6K in gearboxes for conveyors, etc?
SEP14062	9/30/2014	Brown Engineering Co	$325.00		
13063481-00	9/2/2014	Building Fasteners	$323.51	bolts and nuts	
7/28/2014	7/28/2014	Casey's	$250.35	fuel for reefer	
	8/5/2014	Casey's	$206.43	fuel for reefer	
	8/13/2014	Casey's	$201.67	fuel for reefer	
	8/13/2014	Casey's	$198.90	fuel for reefer	
	8/21/2014	Casey's	$258.88	fuel for reefer	
	8/25/2014	Casey's	$209.85	fuel for reefer	
	9/3/2014	Casey's	$338.80	fuel for reefer	
	9/3/2013	Casey's	$265.81	fuel for reefer	
	9/8/2014	Casey's	$214.81	fuel for reefer	
24069	9/17/2014	Clean Co	$6,778.46	steam boiler rental	
24070	9/18/2014	Clean Co	$6,505.25	steam boiler rental	
24071	9/19/2014	Clean Co	$2,835.00	steam boiler rental	
24702	9/19/2014	Clean Co	$8,639.45	steam boiler rental	
	9/23/2014	Clean Co	$433.75	steam boiler rental	$25K for steam boiler rental for test

4394	10/9/2014	CMS Heat Transfer	$11,270.00	tubesheet for reboiler	Paid?
29607	8/19/2014	Easy Automation	$9,115.54	assebly labor	
9628	8/21/2014	Easy Automation	$6,668.08	assembly labor	
29632	8/21/2014	Easy Automation	$3,412.21	assembly labor	
29635	8/22/2014	Easy Automation	$2,400.00	assembly labor	
29656	8/26/2014	Easy Automation	$2,948.98	assembly labor	
29659	8/26/2014	Easy Automation	$10,142.18	assembly labor and weigh scale parts	$35K for EEA labor and parts
GMI-181236	6/18/2014	Guy Metal	$6,612.50	stainless	For what? Tanks? Hopper?
181210/231	6/18/2014	Guy Metal	$10,956.04	stainless	For what? Tanks? Hopper?
400412 SE	6/24/2014	Guy Metal	$6,612.50	stainless	For what? Tanks? Hopper?
S100746409.001	9/12/2014	J.H. Larson	$626.55	mounting struts	
	9/17/2014	Jake Korte	$100.00		
	8/9/2014	Jason Hugie	$50.00		
7/26/2014	7/26/2014	Kim Rock	$90.00		
	8/9/2014	Kim Rock	$121.91		
3536	7/21/2014	M&G Services	$8,721.00	assmbly labor	
3538	7/21/2014	M&G Services	$668.57	assembly labor	
3544	7/28/2014	M&G Services	$671.44	assmebly labor	
3542	7/28/2014	M&G Services	$207.00	assembly labor	
3543	7/28/2014	M&G Services	$2,566.00	assembly labor	
3556	8/4/2014	M&G Services	$3,050.50	assembly labor	
3557	8/7/2014	M&G Services	$3,279.29	assembly labor	
3571	8/13/2014	M&G Services	$12,230.25	assembly labor	
3573	8/13/2014	M&G Services	$190.70	assembly labor	
10/18/1909	8/18/2014	M&G Services	$2,604.00	assembly labor	
3585	8/25/2014	M&G Services	$2,815.00	assembly labor	
3586	8/25/2014	M&G Services	$4,988.00	assembly labor	
3607	9/3/2014	M&G Services	$522.00	assembly labor	
3608	9/3/2014	M&G Services	$6,588.50	assembly labor	
3612	9/5/2014	M&G Services	$2,813.00	assembly labor	$51,915 total M&G

94938669	8/8/2014	McMaster Carr	$94.35	misc	
1641260	7/31/2014	McNeilus Steel	$1,270.64	steel for frames	
1643699	8/5/2014	McNeilus Steel	$4,281.90	steel for frames	
8/5/6406	8/8/2014	McNeilus Steel	$4,893.60	steel for frames	
1647912	8/14/2014	McNeilus Steel	$648.00	steel for frames	
1647028	8/14/2014	McNeilus Steel	$445.20	steel for frames	
1649109	8/15/2014	McNeilus Steel	$430.59	steel for frames	
1651150	8/22/2014	McNeilus Steel	$915.26	steel for frames	
1653392	8/27/2014	McNeilus Steel	$261.50	steel for frames	
1653764	9/5/2014	McNeilus Steel	$90.81	steel for frames	
1659737	9/15/2014	McNeilus Steel	$909.63	assembly labor	$14K in steel for frames
163720	8/16/2014	McNichols Company	$3,385.06		For what?
main fuel train	7/8/2014	Phoenix Oil Heater	$109,900.00	oil heater	PAID???
40762	8/8/2014	Pritts Electric Motors	$277.00	motors	
400435SE	7/22/2014	Rode Manufacturing	$347.50	shafts machining	
123129	7/31/2014	Ruthven Coop Oil	$109.84	oil for reefer	
10995	9/16/2014	Service Master	$80.16		
1/2 Dumpster		Shamrock	$4,110.99	beet disposal	
SG1483	7/10/2014	Surplus Group, LLC	$36,800.00	cooling tower	PAID???
SG1483	7/10/2014	Surplus Group, LLC	$385.00	cooling tower	PAID???
16185	8/20/2014	Tim Meyer	$83.70	rv expenses	
	9/5/2014	Tim Meyer	$2,500.00	rv rental	
	9/15/2014	Tim Meyer	$2,500.00	rv rental	
16246	9/25/2014	Tim Meyer	$1,156.13	fuel for RV	$6K for RV expenses
400418 SE	6/27/2014	TW Metals	$1,133.04	tubing	
20835	7/25/2014	Vincent Shredder	$500.00	shredder rental	
20968	8/27/2014	Vincent Shredder	$1,000.00	shredder rental	
21094	9/25/2014	Vincent Shredder	$1,000.00	shredder rental	$2500 for Shredder rental
40210	6/23/2014	Zeochem, LLC	$500.00	supplies for test	

		My Notes/Approx. values all below
Quick APPROX. Summary of Major Vendors	**$462,500**	97% of total on previous sheet
Labor/Matls.		
AMEC	$80,000	
M&G Services	$52,000	
EEA Labor	$35,000	
Steel for Frames	$14,000	
Staninless Steel	$25,000	for what? Might be useful to know if was tank steel
Equipment		
Andrtiz	$55,000	Paid. Be sure Includes $10K of high pressure steam controls not installed for testing
Surplus Co - Cooling Tower	$37,000	$28K to be PAID in Oct?
Heat exchanger	$11,000	$All to be PAID in Oct.?
Oil Heater Pkg?	$110,000	$88K to be PAID in Oct.?
Rentals		
Beet storage and disposal	$10,000	refer, fuel, disposal
Boiler Rental	$25,000	
Shredder Rental	$2,500	
RV Rental	$6,000	

Attachment 5.0

Easy Energy Systems ARV 12-033 Funds Accounting

Easy Energy Systems awarded a Services Agreement by Mendota Bioenergy. A May 30, 2014 for the fabrication and operation of the modular ethanol plant. Mark Gaalswyk, CEO signed the document on June 6, 2014.
A Services Agreement was selected as the appropriate contractual instrument as opposed to a Sales Agreement for the purchase of the modular ethanol system. Easy Energy would demobilize the equipment and return it to Minnesota following completion of the test run at Red Rock Ranch.
A copy of the EES-MB Services Agreement was contained in the Commission-Mendota 11/13/2014 meeting packet with timelines and deliverables for performance.

Mendota advanced Easy Energy three (3) tranches of $750,000 according to terms established by the Services Agreement for specific performance items.

When it became apparent that EES was not making adequate progress on the Services Agreement, Mendota's counsel Matt Hoffman, Esq. of Baker, Manock & Jensen Fresno sent the notification of a contract breach to Mr. Gaalswyk. Mr. Hoffman requested an accounting of the funds spent today by Easy Energy on the Mendota project funded by the Commission. Mr. Gaalswyk sent the attached unaudited statement that is attached to this packet as Attachment 5.0. Steve Zicari P.E. has done an analysis of the EES statement, which is contained as Attachment 5.1.

It should be noted that Mr. Gaalswyk has been cooperative following notification of the contract breach and has indicated that while he is disappointed he will assist Mendota in any way possible to move the project forward to a successful conclusion to include shipping equipment, turning over engineering documents and releasing Intellectual Property.

His cooperation is indicated by Novozyme and Clariant enzymes that were recently shipped to Red Rock Ranch from Emmetsburg, Iowa for use in the demonstration plant.

Mendota expects his cooperation will be maintained as fabricated equipment useful to the project is shipped to California.

Expenses for Mendota Project

Wages related to Mendota Project

2014	
January	$16,355.77
Feburary	$19,917.73
March	$25,475.28
April	$19,294.35
May	$23,938.85
June	$29,310.75
July	$30,655.13
August	$81,882.48
September	$84,284.53
October	$48,627.62
	$379,742.49

Selling expense and project solutions engineering for 2013	$158,152.18
Selling expense and project solutions engineering for 2012	$82,592.46
Total Wages	**$620,487.13**
Total Travel Expenses for Mark Gaalswyk to CA	**$8,884.00**
Total Parts and Supplies and Engineering	**$477,468.40**

Total non-wage overhead allocated to Mendota project for past 12 months. 50% allocation (2 projects active) **$ 172,133.00**

Rent, phone, portion of general insurance, utilities, accounting and legal fee, etc

Extra insurance required for Mendota Project

$17,365.10	Professional Liability
$20,184.85	General Liability increase due to Mendota
$17,793.00	Pollution Insurance
$3,496.00	General Liability increase limits

ONLY **$ 58,838.95**

TOTAL **$ 1,328,927.48** Total Expenses Directly For Mendota Project

Exhibit A
Scope of Work
Advanced Biorefinery Center—Mendota Integrated Demonstration Plant

(SOW Revisions 23July13 J. Tischer)
SOW Revisions 12February 2014 J. Tischer, E. Suryadi)
SOW Revisions 28March2014 J.Tischer

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Agreement Management
2		Energy Beet Production
3		Design Phase
4		Pre-Construction
4.1		Final Agreements
4.2		Construction and Equipment List
4.3		Approval to Proceed to Construction
5	X	Construction
6		Plant Operations
6.1		Demonstrate Advanced Ethanol Production Plant
6.2		Demonstrate Anaerobic Digestion Plant
6.3		Demonstrate the Pilot Biodiesel Production Plant
6.4		Test Plan Preparation
7		Biofuels Development Analysis
7.1		Perform Lifecycle Analysis
7.2		Quantify Lifecycle Economic and Environmental Benefits
8		Coordination
8.1		Integration of Material and Information Flows
8.2		Optimize and Demonstrate Integrated Biorefinery Model
9		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Ellen Suryadi--MBLLC, Jim Tischer—MBLLC, Bill Pucheu – MBLLC, Jim Latty PhD, P.E.	MBLLC*, JAL Engineering	
2	John Diener--RRR, Steve Kaffka--UCD, Jim Tischer--MBLLC, Cliff Ohmart--SureHarvest, Steve Libsack—Betaseed/KWS	DelTesta Harvesting; Cartel Transport, LLC; Energy-beet contracted farmers; MAABC; UCD; Fresno State; Betaseed; SureHarvest	
3	~~Mark Gaalswyck, EZ Energy, Systems Jayden Grupe,~~	~~EZ Energy Systems~~	

	~~EZES, Jason Greenfield,~~ EZES		
4	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield,~~ EZES	~~Easy Energy Systems~~ **JAL Engineering**	
4.1	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield, EZES~~	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield, EZES~~	
4.2	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield, EZES~~	~~Easy Energy Systems~~	
~~4.3~~	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield, EZES~~	~~Easy Energy Systems~~	
5	~~Mark Gaalswyck, Jayden Grupe, Jason Greenfield, EZES~~	~~Easy Energy Systems~~	
6	TBD, Pilot-Plant Manager, Jim Latty JAL,	~~Easy Energy~~, MBLLC, JAL Engineering, UCD,	
6.1	TBD, Pilot-Plant Manager, MBLLC, JAL Engineering, ~~Easy Energy Systems~~	RRR **JAL Engineering**	
6.2	Ruihong Zhang--UCD	Cartel Transport, LLC, UCD	
6.3	John Diener--RRR, Russ Teall--BIODICO, Gary Bañuelos—USDA-ARS	RRR, BIODICO, USDA-ARS	
6.4	Jim Latty, JAL, Mark Gaalswyck, EZES, John Diener, RRR, Russ Teall, Biodico	JAL, ~~Easy Energy~~, RRR, Biodico	
7	Jim Tischer--MBLLC, John Diener, RRR, Russ Teall, Biodico		
7.1	Alissa Kendall--UCD, Steve Kaffka--UCD	UCD	
7.2	Dr. Santiago Bucarum --UCD, Mickey Paggi--CSUF	UCD, CSUF	
8	John Diener--RRR, Jim Tischer—MBLLC, , ~~Mark Gaalswyck, EZES,~~ , Ruihong Zhang--UCD, Steve Kaffka--UCD, Russ Teall—BIODICO, Jim Latty, JAL	**JAL Engineering**	

8.1	John Diener--RRR, Jim Tischer--CSUF,L Mark Gaalswyck, EZES, Jim Latty, JAL, Ruihong Zhang--UCD, Steve Kaffka--UCD, Russ Teall--BIODICO	MBLLC*, MABBC, ~~IR1,~~ UCD, RRR, BIODICO **JAL Engineering**	
8.2	Jim Latty, JAL, Jim Tischer, MBLLC	JAL, UCD, MBLLC*	
9	Jim Tischer—MBLLC, Ruihong Zhang—UCD, ~~Mark Gaalswyck, EZES,~~ Jim Latty, JAL, Russ Teall, Biodico, John Diener, RRR	EZES, JAL, MABBC, UCD, Biodico	

* Applicant

GLOSSARY

Specific terms and acronyms used throughout this work scope are defined as follows:

Acronym	Definition
AB-CB	Advanced Biofuel and Cellulosic Biofuel
ABC-M	Advanced Biorefinery Center—Mendota
ARB	Air Resources Board
ARFVT	Alternative and Renewable Fuel and Vehicle Technology
BMP	Best Management Practices
CA-BCAM	California Biomass Crop Adoption Model
CA-GREET	California Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model
CARB	California Air Resources Board
CCM	Commission Contract Manager
CGE	Computable General Equilibrium
CI	Carbon Intensity
CNG	Compressed Natural Gas
CPR	Critical Project Review
CSUF	California State University, Fresno
EES	Easy Energy Systems
EMFAC	Emissions Factors
EPC	Engineering, Procurement, and Construction
GHG	Greenhouse Gas
GPM	Gallons per Minute
HP	Horsepower
HDT	Heavy Duty Truck
IDP	Integrated Demonstration Project
ILUC	Indirect Land Use Changes
IMPLAN®	Impact Analysis for Planning. For any given industry, the software model enables quantification of outputs (value of production), labor income,

Acronym	Definition
	direct and indirect jobs and value added, both before and after taking into account the multiplier effects on the entire economy.
~~IR1~~	~~The IR1 Group~~
JAL	**JAL Engineering**
LCA	Lifecycle Analysis
LCFS	Low Carbon Fuel Standard
MABBC	Mendota Advanced Bioenergy Beet Cooperative
MBLLC	Mendota Bioenergy LLC
MGD	Million Gallons per Day
MJ	Mega joule
MPU	Modular Production Unit
MW	Megawatt
PE	Partial Equilibrium
RIN	Renewable Identification Number
RRR	Red Rock Ranch
SCF	Standard Cubic Feet
TPY	Tons per year
UCD	University of California, Davis
USDA-ARS	United States Department of Agriculture—Agricultural Research Service
WWT	Waste Water Treatment

Background:

Assembly Bill 118 (Nùñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVT Program). The statute, subsequently amended by AB 109 (Nùñez, Chapter 313, Statutes of 2008), authorizes the Energy Commission to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. The Energy Commission has an annual program budget of approximately $100 million and provides financial support for projects that:

- Develop and improve alternative and renewable low-carbon fuels;
- Optimize alternative and renewable fuels for existing and developing engine technologies;
- Produce alternative and renewable low-carbon fuels in California;
- Decrease, on a full fuel cycle basis, the overall impact and carbon footprint of alternative and renewable fuels and increase sustainability;
- Expand fuel infrastructure, fueling stations, and equipment;
- Improve light-, medium-, and heavy-duty vehicle technologies;
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
- Expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
- Establish workforce training programs, conduct public education and promotion, and create technology centers.

The California Energy Commission issued solicitation PON-11-601 to provide funding opportunities under the ARFVT Program for projects which either create new, low carbon fuel production facilities, or lower the carbon intensity of fuels produced at existing facilities. To be supported, a project must demonstrate both economically competitive yields and lower GHG potential than the Low Carbon Fuel Standard (LCFS) for corn ethanol or soy biodiesel pathways. In response to PON-11-601, Mendota Bioenergy LLC submitted application #38, which was recommended for funding under the round two Notice of Proposed Awards issued on October 5, 2012. Mendota Bioenergy LLC's Application is incorporated by reference to this Agreement in its entirety.

Problem Statement:

The primary problem that the project team is attempting to solve is the lack of a commercial-scale domestic source of cost-competitive, low-carbon-intensity transportation fuels. The principal barriers that hinder the development of such fuels and their widespread deployment in California are:

- **Insufficient Field Demonstrations**
  The design and construction of a biorefinery at the scope of the future $170-million, commercial-scale Advanced Biorefinery Center—Mendota (ABC-M) requires the integration of numerous biofuel production technologies. This project will provide a working pilot-demonstration of a commercial-scale ABC-M biorefinery, allowing design refinements based on field testing, and greatly lowering the investment risks for such a larger plant.

- **Biotechnological Challenges**
  The process of cost-effectively releasing sugars and oils from biomass can be quite challenging and costly at the scales required for commercial production. Therefore, this project will allow for the thorough testing and refinement of the final commercial-scale design.

Goals of the Agreement

The goals of the proposed demonstration project are to: 1) demonstrate technologies and processes necessary for commercial-scale California-based production of cost-competitive, low-carbon-intensity transportation fuels; 2) develop high-value biobased products; and 3) demonstrate that the proposed sources of renewable biomass for conversion into biofuels and biobased products are economically, environmentally, and socially sustainable and suitable for commercial scale-up on ABC-M. Mendota Bioenergy LLC ultimately seeks to create a production chain that produces renewable transportation fuels with a carbon intensity lower than any other gasoline substitute biofuels produced in the U.S.

Objectives of the Agreement:

At the end of the project, the project team will gather all data collected and compare all performance metrics targets below to actual results. The objectives of this project are to:

- **Develop Feedstocks**
  - Implement an innovative first-in-the-world "All Beets, All the Time" harvest plan, in which ~~10,000~~ **2400** tons of carbon-optimized energy beets are planted, grown, harvested, and transported (~~using a demonstrated paperless tracking system and infrared sampling system~~) from a total of 250 acres divided among nine growers local to the Integrated Demonstration Project (IDP). This Plan will demonstrate that year-round energy beet harvesting can be done cost-effectively.

    Performance Metrics:

    - Acres of Beets Planted (target = ~~250~~ **61**)
    - Tons of Beets Harvested (target = ~~10,000~~ **2400**)
    - Energy Beet Crop Yield (target = 40 tons/acre)
    - Dry Matter Content (target = 22.5%)
    - Convertible Biomass Content (target = 90% dry matter)
    - Number of Months in Which Harvesting Occurred (target = 12)

- **Develop Biofuels and Biobased Products**
  - Design, construct, and operate a pilot-scale plant that converts approximately ~~10,000~~ **2400** tons per year of carbon-optimized energy beets into ~~285,000~~ **60,000** gallons of 200-proof ethanol. Includes integration of advanced enzyme process and microbial conversion technologies, never before used in the US, that will significantly increase ethanol yield per ton, and reduce capital costs and energy use on the commercial ABC-M.

    Performance Metrics:

    - Completion of Design Documents
    - Construction of Facility on Time & Budget
    - Tons of Beets Processed (target = ~~10,000~~ **2400**)
    - Gallons of 200-proof AB-CB Ethanol Produced (target = ~~285,000~~ **60,000**)
    - AB-CB Ethanol Yield (target = 28 gal/ton)

  - Produce fertilizer through the anaerobic digestion of energy beet stillage and glycerin at the University of California, Davis (UCD) Biogas Pilot Plant.

    Performance Metrics:

    - Tons of Energy Beet Stillage and gallons of glycerin delivered to UCD Digester

  - Demonstrate use of locally sourced, low carbon, high-yield, salinity-tolerant varieties of canola and/or safflower used as feedstock in an

existing, small-scale oil seed crushing and biodiesel production unit (BIODICO) at Red Rock Ranch to produce biodiesel (B20 blend) for project's energy beet cultivation, harvest, and transport equipment. Glycerin produced as a by-product will be tested as an accelerant for the co-digestion of multiple substrates at the UCD pilot digester.

Performance Metrics:

- Acres of Canola Planted (target = 40)
- Canola Crop Yield (target = 0.89 tons/acre)
- Canola Oil Content (target = 35%)
- Biodiesel Yield (target = 0.9 gal/gal canola oil)
- Gallons of Biodiesel Produced (target = 3,038)
- Percentage of project equipment using project-produced biodiesel
- Gallons of glycerin produced and delivered to UCD Digester

- **Analyze Biofuels Development**
  The following objectives are not easily measured quantitatively. Thus, the success of these objectives will be judged on a qualitative basis. Progress on and completion of the task activities—regardless of their results and implications for commercial-scale ABC-M—will be evaluated by the Commission Agreement Manager on a regular basis, with timely feedback to the Recipient to ensure satisfactory completion.

  - Calibrate California Biomass Crop Adoption Model (CA-BCAM) model for farms and production conditions and develop computer-based life cycle assessment (LCA) model tailored to the proposed biofuel production pathway.
  - Measure and analyze the lifecycle environmental flows for beet production and calculate fuel carbon intensity from crop production data.
  - Estimate the full supply chain burdens of chemical, water, and energy inputs; and waste, pollution, and product and co-product outputs.
  - Use data from farmer interviews, CA-BCAM simulation, and the LCA model to calibrate Best Management Practice (BMP) assessment tools.

TASK 1 ADMINISTRATION

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a "Kick-Off" meeting with the Commission Project Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Project Manager to this meeting. The

administrative and technical aspects of this Agreement will be discussed at the meeting. Prior to the kick-off meeting, the Commission Project Manager will provide an agenda to all potential meeting participants.

The administrative portion of the meeting shall include, but not be limited to, the following:

- Discussion of the terms and conditions of the Agreement
- Discussion of Critical Project Review (Task 1.2)
- Match fund documentation (Task 1.6). No work may be done until this documentation is in place.
- Permit documentation required (Task 1.7)
- Discussion of subcontracts needed to carry out project (Task 1.8)

The technical portion of the meeting shall include, but not be limited to, the following:

- The Commission Project Manager's expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products
- Discussion of Progress Reports (Task 1.4)
- Discussion of Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Discussion of the Final Report (Task 1.5)

The Commission Project Manager shall designate the date and location of this meeting.

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

Commission Project Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. CPRs generally take place at key, predetermined points in the Agreement, as determined by the Commission Project Manager and as shown in the Technical Task List above. However, the Commission Project Manager may schedule additional CPRs as necessary, and any additional costs will be borne by the Recipient.

Participants include the Commission Project Manager and the Recipient and may include the Commission Grants Officer, the Fuels and Transportation Division (FTD) team lead, other Energy Commission staff and Management as well as other individuals

selected by the Commission Project Manager to provide support to the Energy Commission.

The Commission Project Manager shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. One of the outcomes of this meeting will be a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see the Terms and Conditions, Section 8). If the Commission Project Manager concludes that satisfactory progress is not being made, this conclusion will be referred to the Transportation Committee for its concurrence.
- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work on the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the Commission Project Manager and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

Commission Project Manager Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

  This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the Commission Project Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Project Manager.

  The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The Commission Project Manager will determine the appropriate meeting participants.

  The administrative portion of the meeting shall be a discussion with the Commission Project Manager and the Grants Officer about the following Agreement closeout items:
  - What to do with any equipment purchased with Energy Commission funds (Options)
  - Energy Commission's request for specific "generated" data (not already provided in Agreement products)
  - "Surviving" Agreement provisions
  - Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 Monthly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the research objectives of this Agreement on time and within budget.
The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Project Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving its goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.
The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.
The Final Report shall be a public document. If the Recipient has obtained confidential status from the Energy Commission and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report.
- Prepare a Final Report following the approved outline and the latest version of the Final Report guidelines which will be provided by the Commission Project Manager. The Commission Project Manager shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Draft Outline of the Final Report
- Final Outline of the Final Report
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then, state such in the letter. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
  - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
  - Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant, a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Project Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Project Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR.

Products:

- A letter regarding match funds or stating that no match funds are provided

- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
- A list of the permits that identifies the:
    - Type of permit
    - Name, address and telephone number of the permitting jurisdictions or lead agencies
- The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the Commission Project Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Project Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Project Manager within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is for Recipients to identify any subcontracts required to carry out the tasks under this Agreement and to procure them consistent with the terms and conditions of this Agreement and the Recipient's own procurement policies and procedures. It will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Prepare a letter documenting the subcontracts required to conduct this Agreement, and submit it to the Commission Project Manager at least 2 working days prior to the kick-off meeting. If there are no subcontracts required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that subcontracts will be required during the course of the Agreement, provide in the letter:
    - A list of the subcontracts that describes the anticipated maximum budget and general scope of work for each,
    - A description of the procurement process to be used, and
    - The schedule the Recipient will follow in applying for and obtaining these subcontracts
- Submit a draft of the subcontract that will include a budget with the information required in the budget details to the Commission Project Manager for review.
- Submit a final copy of the executed subcontract.
- **Per Recipient's request, add JAL Engineering as a major subcontractor to perform the work of the former subcontractor IR-1 which has withdrawn from this project.**

Products:

- Letter describing the subcontracts needed, or stating that no subcontracts are required
- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 ENERGY BEET PRODUCTION

The goals of this task are to plant, grow, harvest, and transport ~~10,000~~ **2400** tons of carbon optimized energy beets for the ABC-M IDP and demonstrate the viability of year-round energy beet harvesting.

The Recipient shall:

- Perform energy beet agronomic work for energy beets in the western San Joaquin Valley.
    - Monitor test plantings of beets and evaluate a range of fertilizer application rates for yield and quality.
    - Quantify optimum nitrogen use for winter-harvested energy beets.
    - Produce best management practice guidelines for pilot-plant contracted energy beet growers.
- Develop and implement a Best Management Practices (BMP) Self-Assessment Workbook Framework for energy beet growers. Use this framework as the basis for implementing a low-carbon pricing system in the future.
- Create an energy beet grower payment system based in part on the carbon intensity of the harvested beets.
- Employ a new ticketless tracking system and an on-board infrared sugar-content testing system to better manage energy beet harvest operations to reduce carbon and resource inputs.
- Secure contracts with local energy beet farmers who will use the BMPs to plant, grow, cultivate, and irrigate designated energy beet parcels, and supply approximately ~~10,000~~ **2400** tons of energy beets to ABC-M IDP during the period November 2013 to October ~~2014~~ **2015**. Contracted farmers will measure cultural/harvest operation carbon inputs for their respective parcels and report same to Mendota Advanced Bioenergy Beet Cooperative monthly.
- Harvest and deliver energy beets to ABC-M IDP as directed.

Products:

- Best Management Practices Self-Assessment Workbook Framework
- Contracts with local energy beet farmers

TASK 3 DESIGN PHASE – Integrated Demonstration Plant (IDP)

The goal of this task is to design and engineer all components of the proposed Integrated Demonstration Plant.

The Recipient shall:

- Design and engineer a 1 Million gallon per year ("1 MGPY") pilot scale Advanced Ethanol plant. This plant will be operated to produce approximately ~~285,000~~ **60,000** gallons of 200-proof ethanol over the project period. Produce Design Package for Advanced Ethanol Plant that includes:

- Piping & Instrumentation Diagrams (P&IDs)
- General Arrangement Drawings
- Equipment List
- Electrical One Line Drawings

- Design and engineer modifications to the existing anaerobic digester located at the University of California, Davis Wastewater Treatment Plant. Produce modified Design Package for UCD Anaerobic Digester that includes:

  - Piping & Instrumentation Diagrams (P&ID) revisions
  - Equipment List
  - Installation details as necessary

Products:

- Design Package for Advanced Ethanol plant
- Modified Design Package for UCD anaerobic digester

TASK 4 PRE-CONSTRUCTION

Key Subcontractor Easy Energy Systems (EES) is a manufacturer of modular ethanol production systems ("MEPS"), a deliverable under this contract. Before delivering the MEPS unit to California, EES shall test the MEPS unit currently located in Emmetsburg, Iowa, using a small amount of California beets. Upon successful testing, EES shall demobilize the MEPS unit, truck it to Red Rock Ranch in Five Points, California, and re-assemble it for start-up and operation in California, to produce advanced and cellulosic ethanol from energy beets. At RRR, EES shall integrate the MEPS with a Cross beet washer/pre-processer to prepare the beets for enzyme liquefaction and subsequent conversion to ethanol.

Recipient has hired Dr. Jim Latty PhD, P.E. a seasoned process engineer in the petroleum, chemical, drug and renewable fuels industries to advise and work with EES in order to (1) demonstrate plant start up, and (2) generate key plant operational data sufficient to attract a commercial Engineering, Procurement, Construction (EPC) contractor for providing services needed for Recipient's planned commercial 15 MGY biorefinery.

Task 4.1 Final Agreements

The goal of this task is to obtain all final agreements necessary to begin construction.

The Recipient shall:

- Prepare an Agreements Letter documenting the agreements necessary to construct the project. At a minimum, this letter will include:

- Land agreement for control of project site
- Supply agreement with feedstock providers
- Purchase Order with fuel purchasers

- Secure the agreements as detailed in Agreements Letter

Products:

- Agreements Letter
- Records of necessary agreements

Task 4.2 Construction and Equipment List, Procurement Schedule, & Construction Estimate

The goal of this task is to finalize the project design and construction costs prior to incurring major construction expenses.

The Recipient shall:

- ~~Prepare an Equipment List documenting the necessary equipment for the completion of the project. The Equipment List will include all items to be purchased, constructed, or installed on the project. For each item, the list shall provide:~~
  - ~~The name of the item~~
  - ~~The make, model, size, capacity or other information as appropriate to the item~~
  - ~~The estimated cost to purchase each item~~
- ~~Prepare a Procurement Schedule for the equipment identified on the Equipment List. The Procurement Schedule will identify the purchase orders needed to acquire the items on the equipment list and shall provide:~~
  - ~~The name of the entity that will be carrying out the purchase and/or installation of the item~~
  - ~~A description of the equipment, by item number, contained in each purchase order~~
  - ~~The schedule for obtaining a binding bid from the supplying or installing entity~~
  - ~~The schedule for placing each purchase order~~
  - ~~The delivery schedule for each equipment item, by purchase order~~

- **Coordinate engineering integration and modular construction of first energy beet to advanced / cellulosic ethanol demonstration plant in the United States.**
  - **Working with key subcontractors prepare accurate production flow diagrams, mass/energy balance and necessary modular equipment modifications to accommodate characteristics of liquefied energy beets.**
  - **Assist equipment vendor to conduct a pre-delivery test run of California energy beets prior to delivery of MEPS to RRR in California.**

- **Prepare RRR demonstration facility site to successfully receive 10 low-bed truck loads of energy beets per day,**
- **Assemble the MEPS and perform a successful start up of the MEPS upon its arrival at RRR.**

- Prepare a Construction Estimate for the completion of the Integrated Demonstration Plant including the estimated costs for the:
  - Site work
  - Foundations & structures
  - Equipment
  - Equipment installation
  - Piping and electrical materials installation

Products:

- Equipment List
- Procurement Schedule
- Construction Estimate

TASK 4.3 Approval to Proceed with Construction

The goal of this task is to document preparedness to build the project and to secure Commission Agreement Manager written approval to begin incurring major construction costs.

The Recipient shall:

- Prepare a Written Notification of Readiness to Construct stating the project has obtained all permits, third party agreements, binding construction and equipment bids, and all other items necessary to begin construction.
- Develop proposed Construction Schedule identifying the necessary tasks and their durations from the projected start of construction until the commercial operations date of the project.

Products:

- Written Notification of Readiness to Construct
- Construction Schedule

TASK 5 CONSTRUCTION

The goal of this task is to construct the IDP and prepare it for operation.

The Recipient shall:

- Execute construction of the project as outlined in the Construction Schedule, Construction Estimate, Procurement Schedule, and Equipment List. The construction of the Integrated Demonstration Plant shall include the following major components:

- Feedstock receiving and transfer system
- Feedstock pre-processing system
- Advanced Ethanol plant
- Modifications to UCD anaerobic digester
- Fuel distribution system

- Commissioning and start-up of the facility
- Prepare a Written Notification of Demonstration Operation and submit it to the Commission Agreement Manager within ten working days of commencement of operations of the project for the intended demonstration usage. The Written Notification shall contain the following elements:
  - The date the project achieved commercial operation(s)
  - A narrative on the current status of the project and initial operations
  - Any changes made from the project schedule as originally proposed and reasons for those changes.
- Conduct Critical Project Review process as per Task 1.2. Prepare Critical Project Review Report.

Products:

- Written Notification of Demonstration Operation
- Critical Project Review
- Critical Project Review Report

TASK 6 PLANT OPERATIONS

The goal of this task is to operate the Advanced Ethanol Production Plant and Pilot Biodiesel Plant as planned and to begin to collect data to document the project's fulfillment of its objectives.

TASK 6.1 Demonstrate Advanced Ethanol Production Plant

The goal of this task is to demonstrate the Advanced Ethanol Production Plant that will produce approximately ~~285,000~~ **60,000** gallons of 200-proof AB-CB Ethanol over the project period.

The Recipient shall:

- ~~Demonstrate two innovative technologies: whole beet inventory storage and liquefied beet inventory storage.~~
- Operate the Advanced Ethanol plant for approximately ~~100~~ **36-60** days over a 12-month period, complying with all applicable regulatory standards and producing approximately ~~285,000~~ **60,000** gallons of 200-proof AB-CB Ethanol. As part of this process, consortium will integrate whole beet and liquefied inventory storage technologies described above.
- Distribute the 200-proof ethanol to local ethanol plant(s) and the spent stillage to the UCD Biogas Energy Pilot Plant and growers.
- Prepare Report on Operations in the Monthly Progress Reports. This reporting shall include, but is not limited to, the following information:

- A narrative on operational highlights from the previous month, including any stoppages in production and a statement as to the project's compliance with regulatory requirements. (Note: Advanced Ethanol plant is designed for approximately ~~100~~ **36-60** days of operations in a twelve-month period. Project proponents plan on operating it on a campaign basis for approximately ~~1-2~~ **1** week per month.)
- The total amount of feedstock received and processed on a monthly basis
- The total amount of fuel produced on a monthly basis
- Conversion ratio for feedstock to fuel production
- The direct operational costs of the project, total and per volume of fuel.

Products:

- Report on Operations in the Monthly Progress Reports

TASK 6.2 Demonstrate UCD Biogas Energy Pilot Plant

The goal of this task is to demonstrate the project's UCD Biogas Energy Pilot Plant located at the UC Davis Wastewater Treatment Plant.

The Recipient Shall:

- Accept delivery of all feedstock, including stillage from beets and glycerin from the biodiesel facility.
- Conduct a 3-wet-ton-per-day, 4-month anaerobic digestion plant demonstration and collect data to support subsequent technical and economic scale-up efforts.
- Produce liquid organic fertilizer
- Prepare Monthly Operations Reports. The Operations Reports shall include, but are not be limited to, the following information:
- A narrative on operational highlights from the previous month, including any stoppages in production and a statement as to the project's compliance with regulatory requirements.
- The total amount of feedstock received and processed on a monthly basis
- The total amount of finished products produced on a monthly basis
- Conversion ratio for feedstock to fuel/finished products production
- The direct operational costs of the project
- Prepare Feedstock Procurement Plan and Feedstock Characterization Report.
- Modify and/or upgrade pilot digester plan and test plan.
- Create final report describing demonstration test results and recommendation for anaerobic digester system design and technical operations parameters for scale-up operations.

Products:

- Report on Operations in the Monthly Progress Reports
- Feedstock Procurement Plan
- Feedstock Characterization Report

- Final Report

TASK 6.3 Demonstrate the Pilot Biodiesel Production Plant

The goal of this task is to demonstrate and analyze the integration of Project-produced biodiesel into the feedstock production chain of AB-CB Ethanol.

The Recipient shall:

- Select varieties of high-yield, salinity-tolerant canola and safflower for use as feedstock for the biodiesel production unit.
- Use an estimated 36 tons of seed harvested from 40 acres of planted high-yield, salinity-tolerant varieties of canola to produce ~3,038 gallons of specification-grade B-100 biodiesel and then splash-blend it into B-20 biodiesel.
- Verify biodiesel quality at the Naval Base Ventura County, where BIODICO operates a facility.
- Arrange for delivery of the biodiesel for use in the energy beet tractors, cultivators, harvesters, beet delivery trucks, and IDP loaders, and of the glycerin for use as an accelerant at the UC Davis Biogas Pilot Plant.
- Determine the:
    - Benefits of using biodiesel over petroleum diesel and other fossil energy sources, and update data and assumptions currently used in economic and environmental models.
    - Cost of replacing petroleum diesel with biodiesel, including changes in equipment performance, maintenance, and storage.
    - Analyze the results with GREET 1.8b analysis tool.
- Include data from this task in Report on Operations in the Monthly Progress Reports described above in Tasks 6.1, 6.2 and submit as specified there.

Products:

- Report on Operations in the Monthly Progress Reports

TASK 6.4 Test Plan Preparation

The goal of this task is to prepare the test plan to be used during data collection and analysis.

The Recipient shall:

- Finalize the type of monitoring to be conducted.
- Determine the manner in which the team will validate, analyze, and report data. Such determination will be made at one or several of the Project's Quarterly Project Meetings. The data collected in Tasks 2, 6 & 7 will be shared among Project participants for use in accomplishing the analysis & reporting activities in Tasks 1, 7, 8 & 9.

Products:

- Test Plan

TASK 7 BIOFUELS DEVELOPMENT ANALYSIS

The goal of this task is to evaluate the potential of this project to develop an environmentally sustainable domestic source of renewable biomass for conversion to biofuels, bioenergy, and biobased products. To achieve this goal, several models and assessment tools will be integrated in an innovative manner to create accurate estimates of lifecycle effects of energy beet production and transformation to advanced fuels.

TASK 7.1 Perform Lifecycle Analysis (LCA)

The goal of this task is to perform a lifecycle analysis.

The Recipient shall:

- Calibrate the California Biomass Crop Adoption Model (CA-BCAM) model for farms and production conditions within the project's nine major farming regions.
- Develop data for direct integration into LCA model.
- Develop a computer-based LCA model tailored to the proposed biofuel production pathway. This LCA model will be made available to research partners to assist in decision-making over the entire supply chain. The model will calculate net environmental flows (inputs and emissions) over the entire life cycle (beet production, transport, and conversion facility), considering agronomic practices, soil quality, water quality and water use, the generation or reduction of hazardous or toxic substances, greenhouse gas and criteria air emissions. The model will use outputs from economic modeling, biogeochemical models, and life cycle databases available at UC Davis.
- Document the LCA modeling and results in an LCA Report.
- Measure and analyze the lifecycle environmental flows for beet production.
- Consider the allocation of emissions from crop rotation and the multiple co-products produced from the IDP and, ultimately, from ABC-M.
- Calculate fuel carbon intensity from crop production data.

Products:

- Lifecycle Analysis Report

TASK 7.2 Quantify Lifecycle Economic, Social and Environmental Benefits

The goal of this task is to quantify the project's lifecycle economic and environmental benefits.

The Recipient Shall:

- Quantify whole farm management effects resulting from energy beet crop adoption on farms throughout feedstock production region.
- Link field-level record keeping data to CA-BCAM and LCA models.

- Develop an LCA model that includes beet production, transport, and ABC-M facility construction and operation.
- Quantify the net environmental flows attributable to beet production, including direct estimates of changes to water use, fertilizer, and the generation of air emissions and related toxics from the operation of equipment, transport of product, and production of fertilizers and pesticides.
- Estimate the full supply chain burdens of chemical, water, and energy inputs; and waste, pollution, and product and co-product outputs.
- Quantify the economic, social and environmental benefits of using IDP-produced biodiesel in the energy beet production supply chain.
- Use data from farmer interviews, CA-BCAM simulation, and the LCA model to calibrate Best Management Practice (BMP) assessment tools and help monitor subsequent improvements in cropping system resource use efficiency.
- Utilize IMPLAN (Impact Analysis for Planning) software and accompanying 2009 dataset to determine multiplier effects created by the operation of ABC-M.
- Develop Lifecycle Benefits Report that documents the benefits of integrating environmental, economic, and social modeling efforts, and will provide producers with BMP for decision-making that integrates across environmental, economic, and social impacts.

Products:

- Lifecycle Benefits Report

TASK 8 COORDINATION

TASK 8.1 Integration of Material and Information Flows

The goal of this task is to integrate the material and information flows among Tasks 2, 6, and 7.

The Recipient shall:

- Manage the material and information flows among project participants and technical areas
- **Manage the integration of key demonstration plant operational data, based on one week-per-month production runs optimized each month from the previous month's run.**
- **Integrate monthly mass/energy balance operational data from all runs to reduce energy consumption and calculate system carbon inputs.**
- **Evaluate the viability of using Distillers' Dried Beets, Greens & Solids (DDBGS) as a new animal feed product similar to Distillers' Dried Grains & Solids from a corn-ethanol plant.**
- **Use data from the customized data reporting system to accurately forecast scaled-up energy/water/utility requirements for a 15 MGY advanced / cellulosic ethanol commercial facility.**

- **Invite established commercial-scale EPC contractors to advise Mendota on collection of processing data sufficient to insure comprehensive EPC contracts adequate to meet financing community requirements.**
- Manage **reporting of data from** the delivery of:
  - IDP-produced biodiesel to energy beet growers and truckers for use in their diesel engines.
  - Canola to Oilseed Crusher and BIODICO unit.
  - Biodiesel to Energy Beet growers
  - Energy beets to Ethanol Plant
  - 200-proof AB-CB Ethanol to local customers
  - Spent stillage from ethanol plant to UCD AD facility
  - Spent stillage from ethanol plant to energy beet growers for fertilizer
  - Fertilizer from UCD AD facility to energy beet growers for fertilizer
  - Glycerin from biodiesel plant to UCD AD facility

Products:

- None. Information will be included in the Final Report.

TASK 8.2 Optimize and Demonstrate Integrated Biorefinery Model

The goal of this task is to optimize and demonstrate an integrated biorefinery model.

The Recipient Shall:

- ~~Modify existing IR1 Group financial models for IDP AB-CB Ethanol and digester operations, producing an Integrated Production and Financial Model for use in activities in support of commercial-scale ABC-M.~~
- **Develop ~~appropriate~~ financial model from demonstration plant operational data to accurately design and process engineer an integrated commercial-scale energy beet biorefinery.**
- **Incorporate demonstration plant data obtained from this project into the Recipient's financial model deliverable sufficient to attract potential commercial financing for a 15 MGY integrated energy beet biorefinery.**
- Combine the modified financial models with data generated from IDP operations to create integrated financial model for the ultimate commercial scale ABC-M.
- Support data collection and analysis activities for the biorefinery components mentioned above through onsite visits by UCD personnel, who will collect and compile data about raw feedstock, intermediate process streams, and final product streams, as well as operations and economic information necessary to support technical, economic or LCA assessment.

Products:

- Integrated Production and Financial Model **sufficient to attract potential commercial financing for 15 MGY energy beet biorefinery.**

TASK 9 DATA COLLECTION AND ANALYSIS

The goal of this task is **for Recipient** to collect and analyze operational data to determine the economic viability and environmental impact of the project. Final analysis of all project data must be included in the Final Report.

The Recipient Shall:

- Collect, unless a lesser amount is approved in writing by the Commission Agreement Manager, 4 months anaerobic digester and 12 months Advanced Ethanol operational data from fuel production system to include:
  - Time operating (up and down time),
  - Efficiency of conversion of feedstock,
  - Biofuel production rate,
  - Quality and quantity of fuel produced,
- Estimate gasoline and/or petroleum-based diesel fuel that will be displaced annually.
- Explain how the project will reduce criteria air pollutants and air toxics and reduce or avoid multimedia environmental impact, and lead to a decrease, on a life cycle basis, in emissions of water pollutants or any other substances known to damage human health or the environment.
- Explain how the project incorporated and achieved the sustainability goals.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle scale greenhouse gas emissions.
- Quantify any water efficiency and water use reduction measures used in the project including, but not limited to, the use of recycled or reclaimed water and the reduction or elimination of point and nonpoint source wastewater discharge.
- Describe any potential use of renewable energy or cogeneration in the project.
- Describe any potential energy efficiency measures used in the project that would exceed Title 24 standards in Part 6 of the California Code of Regulations.
- Provide data on expected job creation, economic development, and increased state revenue.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.
- Describe how the project supports new technology advancement for vehicles, vessels, engines, and other equipment, and promote the deployment of such technologies in the marketplace. To the extent possible describe how the project, provided a measurable transition from the nearly exclusive use of petroleum fuels to a diverse portfolio of viable alternative fuels that meets California's petroleum reduction and alternative fuel use goals.
- Describe how the project demonstrated the cost-effectiveness of the proposed technology in achieving greenhouse gas emissions reduction.
- Provide additional data that may be requested by the Energy Commission during the term of this Agreement, as is reasonably available.

Products:

- Information will be included in the Final Report.

Attachment A-1

Schedule of Products and Due Dates

Task Number	*Task Name*	*Product(s)*	*Due Date*
1.1	**Attend Kick-off Meeting**		
		Updated Schedule of Products	2 days prior to the Kickoff meeting
		Updated List of Match Funds	2 days prior to the Kickoff meeting
		Updated List of Permits	2 days prior to the Kickoff meeting
		Kick-Off Meeting Agenda (CEC)	Commission
1.2	**Critical Project Review Meetings**		
	CPR Meeting	CPR Report - Task 5: Construction Completion	~~1/21/2014~~ ~~9/30/14~~ 3/31/15
		Written determination (CEC)	Commission
1.3	**Final Meeting**		
		Written documentation of meeting agreements	~~6/29/2015~~ ~~7/30/15~~ 2/28/16
		Schedule for completing closeout activities	~~6/29/2015~~ ~~8/30/15~~ 3/31/16
1.4	**Monthly Progress Reports**		
		Monthly Progress Reports	The 10th calendar day after each month during the approved term of this Agreement
1.5	**Final Report**		
		Draft Outline of the Final Report	~~9/30/2014~~ ~~12/15/14~~ 1/30/15
		Final Outline of the Final Report	~~12/1/2014~~ ~~1/30/15~~ 6/30/15
		Draft Final Report	~~2/2/2015~~ ~~4/30/15~~ 10/31/15
		Final Report (no less than 60 days before the end term of the agreement)	~~4/30/2015~~ ~~6/30/15~~ 12/31/15
1.6	**Identify and Obtain Match Funds**		
		A letter regarding match funds or stating that no match funds are provided	2 days prior to the Kickoff meeting
		Copy(ies) of each match fund commitment letter(s) (if applicable)	2 days prior to the Kickoff meeting
		Letter(s) for new match funds (if applicable)	Within 10 days of identifying new match funds
		Letter that match funds were reduced (if applicable)	Within 10 days of identifying reduced match funds
1.7	**Identify and Obtain Required Permits**		
		Letter documenting the permits or stating that no permits are required	2 days prior to the Kickoff meeting

Attachment A-1

1.7 (cont)		A copy of each approved permit (if applicable)	Within 10 days of receiving each permit
		Updated list of permits as they change during the term of the Agreement (if applicable)	Within 10 days of change in permits
		Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)	Within 10 days of change in schedule for obtaining permits
1.8	**Obtain and Execute Subcontracts**		
		Letter describing the subcontracts needed, or stating that no subcontracts are required	2 days prior to the Kickoff meeting
		Draft subcontracts	15 days before the scheduled date of execution
		Final subcontracts	Within 10 days of execution
2	**Energy Beet Production**		
		BMP Self-Assessment Workbook Framework	11/29/2013
		Contracts with local energy beet farmers	4/3/2013
3	**Design Phase**		
		Initial Design Package for Advanced Ethanol plant	**3/31/2013**
		Modified Design Package for UCD Anaerobic Digester	9/4/2013
4	**Pre-Construction**		
	4.1	Agreements Letter	**3/31/2013**
		Records of necessary agreements	**3/31/2013**
	4.2	Equipment List	~~3/31/2013 3/30/14~~ 12/15/14
		Procurement Schedule	~~3/31/2013 4/30/14~~ 12/15
		Construction Estimate	~~3/31/2013 4/30/14~~ 12/15/14
	4.3	Written Nofication of Readiness to Construct	~~3/31/2013 4/30/14~~ 12/15/14
		Construction Schedule	~~3/31/2013 3/31/14~~ 12/15/14
5	**Construction**		
		Written Nofication of Demonstration Operation	~~2/4/2014 9/30/14~~ 3/31/15
		Critical Project Review	see Task 1.2
		Critical Project Review Report	~~1/4/2014 10/30/14~~ 6/30/15
6	**Plant Operations**		
	6.1	Report on Operations in Monthly Progress Reports	~~1/10/2014 9/30/14~~ 3/30/15
	6.2, 6.3	Report on Operations in Monthly Progress Reports	~~5/10/2014 10/30/14~~ 4/30/15
	6.4	Test Plan	~~10/4/2013 6/30/14~~ 1/31/15
7	**Biofuels Development Analysis**		
	7.1	Lifecycle Analysis Report	~~12/30/2014 2/28/15~~ 9/30/15
	7.2	Lifecycle Benefits Report	~~12/30/2014 2/28/15~~ 9/30/15
8	**Coordination, Integration & Management**		
	8.2	Integrated Production & Financial Model	~~3/4/2015 6/30/15~~ 10/31/15
9 (Final)	**Data Collection and Analysis**		
		None - Data from this task included in Final Rpt.	N/A

Attachment A-1

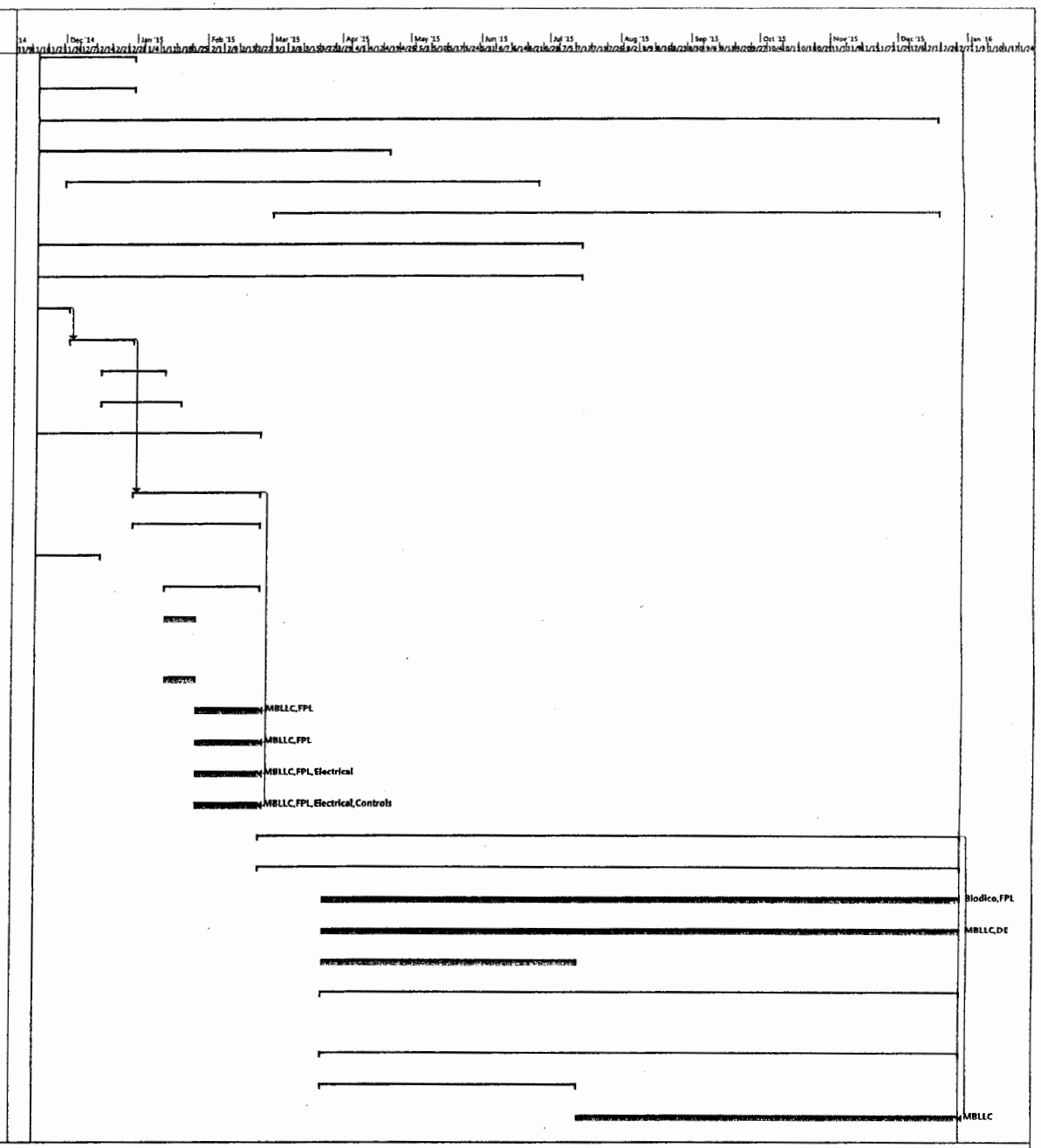
Attachment A-1

Are these considered completed?
Are these considered completed?

Are these considered completed?
Are these considered completed?

Are these considered completed?
Are these considered completed?

ID	Task Mode	WBS	Task Name	Duration	Start	Finish
1		1	ADMINISTRATION AND MANAGEMENT	30 days?	Wed 11/19/14	Tue 12/30/14
2		1.1	Contracting	30 days?	Wed 11/19/14	Tue 12/30/14
13		2	FEEDSTOCK	283 days	Wed 11/19/14	Fri 12/18/15
14		2.1	Existing Beets - 300 Tons	110 days	Wed 11/19/14	Tue 4/21/15
17		2.2	CSUF Beets - 500 Tons	149 days	Mon 12/1/14	Thu 6/25/15
21		2.3	Add'l Beets - 1600 Tons	210 days	Mon 3/2/15	Fri 12/18/15
25		3	PERMITTING, DESIGN, ENGINEERING, SAFETY	170 days	Wed 11/19/14	Tue 7/14/15
26		3.1	Permitting and Compliance	170 days	Wed 11/19/14	Tue 7/14/15
39		3.2	Conceptual Plant Design	10 days	Wed 11/19/14	Tue 12/2/14
43		3.3	Preliminary Engineering	20 days	Wed 12/3/14	Tue 12/30/14
51		3.4	Detailed Engineering	20 days	Wed 12/17/14	Tue 1/13/15
56		3.5	Safety Reviews	25 days	Wed 12/17/14	Tue 1/20/15
59		4	PROCUREMENT, SHOP FABRICATION, TESTING	70 days	Wed 11/19/14	Tue 2/24/15
60		4.1	Procurement	40 days	Wed 12/31/14	Tue 2/24/15
92		4.2	Shop Fabrication	40 days	Wed 12/31/14	Tue 2/24/15
94		4.3	Initial Testing	20 days	Wed 11/19/14	Tue 12/16/14
108		5	CONSTRUCTION	30 days	Wed 1/14/15	Tue 2/24/15
109		5.1	Site Improvement, Grading, Temporary Buildings	10 days	Wed 1/14/15	Tue 1/27/15
110		5.2	Civil and Foundations	10 days	Wed 1/14/15	Tue 1/27/15
111		5.3	Equipment Installation	20 days	Wed 1/28/15	Tue 2/24/15
112		5.4	Piping, Insulation, Catwalks	20 days	Wed 1/28/15	Tue 2/24/15
113		5.5	Electrical	20 days	Wed 1/28/15	Tue 2/24/15
114		5.6	Instrumentation and Controls	20 days	Wed 1/28/15	Tue 2/24/15
115		6	OPERATIONS	220 days	Wed 2/25/15	Tue 12/29/15
116		6.1	Red Rock Ranch Ethanol Facility	220 days	Wed 2/25/15	Tue 12/29/15
119		6.2	Operations @ Biodico	200 days	Wed 3/25/15	Tue 12/29/15
120		6.3	Opearations @ GR/DE	200 days	Wed 3/25/15	Tue 12/29/15
121		6.4	Operations @ UCD	80 days	Wed 3/25/15	Tue 7/14/15
122		7	ASSESSMENT AND COMMERCIAL SCALE PLANNING	200 days	Wed 3/25/15	Tue 12/29/15
123		7.1	Demonstration Facility	200 days	Wed 3/25/15	Tue 12/29/15
127		7.2	Commercial Facility	80 days	Wed 3/25/15	Tue 7/14/15
132		7.3	Final Report	120 days	Wed 7/15/15	Tue 12/29/15



Project: MBLLC RRR Demo Plan
Date: Wed 11/19/14

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress

Bill@Energy Kinney <Bill.Kinney@energy.ca.gov>
To: James R. Tischer <jtischer@mendotabeetenergy.com>
Cc: Elizabeth@Energy John <elizabeth.john@energy.ca.gov>, Butler, John@Energy <john.butler@energy.ca.gov>
RE: MENDOTA BIOENERGY MODIFICATION SUBMITTAL TO CEC

Jim,

I apologize for the delay in this response. Thank you for responding to my requests of 11/14/14. We still need additional information and have some additional questions as follows:

1. The revised budget submitted does not account for the undisbursed funds, as requested. I do not see another document among the attachments that does recognize this amount. If I have missed something, please advise. (ref Att 3.0) Att. 4.0 does provides a total budget for the remaining activities, but it would appear to need an additional column providing the source of the funds for each item. I think that would have satisfied our request.

3. The summary of expenses in Att. 5.0 does not seem to completely answer the question of what services and equipment were or will be delivered to Mendota as a result of the $750,000 payments to EZ Energy. In addition, it contains some problematic line items that will require closer scrutiny, including the ongoing issue of advances to this subcontractor.

As discussed in our meeting, the Energy Commission requests that Mendota return the ~$1.1 million in undisbursed funds immediately. The check should be made out to the California Energy Commission and sent to:

Bill Kinney
California Energy Commission
Fuels and Transportation Division
1516 Ninth Street, MS-27
Sacramento, CA 95814

Please do NOT send this to our Accounting Office. Since grant funds are reimbursed in arrears (i.e., after expenditures have been made), the repayment of these funds should not impact the project. These funds will be put back into the grant award and disbursed for future project expenditures in accordance with the terms and conditions.

We will continue to evaluate this proposed amendment once we have received the payment. If possible, we'd like to have the check by December 8, 2014. Please let me know if you have any questions. Thanks.

ATTACHMENT 8

From: Kinney, Bill@Energy
Sent: Monday, December 01, 2014 1:51 PM
To: James R. Tischer
Cc: John, Elizabeth@Energy; Butler, John@Energy
Subject: RE: MENDOTA BIOENERGY MODIFICATION SUBMITTAL TO CEC

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