CALIFORNIA ENERGY COMMISSION REPORT OF CONVERSATION Page 1 of 1



Siting, Transmission, and Environmenta Protection Division	al		File:	11-AFC-04		
Protection Division		Project Title: Rio Mesa Solar Electric Generating Facility				
Conversation Method: E-Mail		Meeting	Location	on: N/A		
Name(s): Pierre Martinez		Date: 10 - 10/24/1		Time: See Attached E-mails		
With: Todd Stewart (BrightSource)						
Subject: Land Evaluation and Site Asso	essmen	t (LESA)	Score	s Noted in PSA Part B		
On October 18, 2012, Todd Stewart of Brights used for the PSA analysis with respect to pote						
On October 24, 2012, I e-mailed to Mr. Stewa	rt the LE	SA works	sheets.	California Energy Commission DOCKETED		
See attached e-mails.				11-AFC-4		
				TN # 68083		
				OCT. 25 2012		
cc:	Date: '	10/25/12	Signe	ed:		
			Name	2 :		

From: <u>Todd Stewart</u>

To: <u>Martinez, Pierre@Energy;</u>

Subject: Another question

Date: Thursday, October 18, 2012 4:50:17 PM

Pierre,

In reviewing the Land Use section, staff refers to LESA scoring on the impacts to agricultural land. We are honing the acreage estimates and would like to see the LESA worksheet used by staff to update the scores.

Thanks,

Todd

From: <u>Martinez, Pierre@Energy</u>

To: <u>Todd Stewart;</u>

Subject: FW: Site 2 & Site 4 Scanned .pdf documents **Date:** Wednesday, October 24, 2012 10:32:07 AM

Attachments: Site 2.pdf

Site 4.pdf

Todd, per your request for LESA Tables.

Pierre

Pierre Martinez, AICP Project Manager California Energy Commission 1516 Ninth Street, MS 15 Sacramento, CA 95814 Office: 916-651-3765

Email: pierre.martinez@energy.ca.gov

From: Rodriguez, Raquel@Energy

Sent: Wednesday, October 24, 2012 10:27 AM

To: Martinez, Pierre@Energy

Subject: FW: Site 2 & Site 4 Scanned .pdf documents

Here you go I asked Diane because on my scanner it would have took about a half hour and I didn't know if you needed quickly. Diane's scanner took 3 minutes..

From: Scott, Diane@Energy

Sent: Wednesday, October 24, 2012 10:25 AM

To: Rodriguez, Raquel@Energy

Subject: Site 2 & Site 4 Scanned .pdf documents

Here you go!

Respectfully,
Diane L. Scott, *Project Assistant*Siting Unit MS -15
4-4237

Appendix A. California Agricultural LESA Worksheets

NOTES

Site 2

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

- (1) Determine the total acreage of the project.
- (2) Determine the soil types within the project area and enter them in Column A of the Land Evaluation Worksheet provided on page 2-A.
- (3) Calculate the total acres of each soil type and enter the amounts in Column B.
- (4) Divide the acres of each soil type (Column B) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in Column C.
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in Column D.
- (6) From the <u>LCC Scoring Table</u> below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	ı	lle	ils,w	Ille	IIIs,w	IVe	IVs,w	٧	VI	VII	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (Column C) by the point score (Column E) and enter the resulting scores in Column F.
- (8) Sum the LCC scores in Column F.
- (9) Enter the LCC score in box <1> of the Final LESA Score Sheet on page 10-A.

Part 2. Storie Index Score:

- (1) Determine the Storie Index rating for each soil type and enter it in Column G.
- (2) Multiply the proportion of each soil type (Column C) by the Storie Index rating (Column G) and enter the scores in Column H.
- (3) Sum the Storie Index scores in Column H to gain the Storie Index Score.
- (4) Enter the Storie Index Score in box <2> of the Final LESA Score Sheet on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	Ε	F	G	Н
Soil Map	Project	Proportion	LCC	LCC	LCC	Storie	Storie
		of					Index
Unit	Acres	Project Area		Rating	Score	Index	Score
1 1	4 5	(1			~ · ·	x	ا م سر ما
IC		10)*	III s	S 60	20.00	41	25.01
, ,		2 \					
<u>e</u>	5.5	.31	TG-	6 90	24.8	_ 90	27.9
					A	((
(5		,05	115-	6 20	, +	60	3.4
lo l		~ ~		()	<i>★</i>		
LKC	.5	· (0,3	The	6 40) 2.4	69	2.1
				,			,
		(Must Sum		LCC		Storie Index	
Totals	10	` to 1.0)		Total	/ 1 -	Total Score	
	O	,		Score	61.7		>04
			•		_ > / - / - 0		

Site Assessment Worksheet 1.

Project Size Score

	1	J LCC	K
	LCC Class	LCC Class	LCC Class
	1 - 11		IV - VIII
		11	
	5.5		
:	1		
	.5		
Total Acres	7		
Project Size Scores	0	10	
•			

Highest Project Size Score 10

<u>NOTES</u>

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:

- (1) Using Site Assessment Worksheet 1 provided on page 2-A, enter the acreage of each soil type from Column B in the Column I, J or K that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
- (2) Sum Column I to determine the total amount of class I and II soils on the project site.
- (3) Sum Column J to determine the total amount of class III soils on the project site.
- (4) Sum Column K to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the <u>Project Size Scoring Table</u> below and determine which group receives the highest score.

Project Size Scoring Table

Class	l or li	Clas	s III	Class IV or	Lower	
Acreage	Points	Acreage	Points	Acreage	Points	
>80	100	>160	100	>320	100	
60-79	90	120-159	90	240-319	80	
40-59	80	80-119	80	160-239	60	
20-39	50	60-79	70	100-159	40	
10-19	30	40-59	60	40-99	20	
10<	0	20-39	30	40<	0	
		10-19	10			
		10<	0			

(6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Part 2. Water Resource Availability Score:

- (1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.
- (2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in Column B of Site Assessment Worksheet 2. Water Resources Availability.
- (3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.
- (4) Using the <u>Water Resources Availability Scoring Table</u>, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.
- (5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.
- (6) Sum the scores for all portions to determine the project's total Water Resources Availability Score
- (7) Enter the Water Resource Availability Score in box <4> of the Final LESA Score Sheet on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

Α	В	С	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Irrigation District	1.0	05	85
2	9			
3		·		
4				
5				
6				
		(Must Sum to 1.0)	Total Water Resource Score	

Water Resource Availability Scoring Table

		Non-Drought Year	s							
Option		RESTRICTIONS			RESTRICTIONS					
•	Irrigated	Physical	Economic	Irrigated	Physical	Economic	1			
	Production	Restrictions	Restrictions	Production	Restrictions	Restrictions	SCORE			
	Feasible?	?	?	Feasible?	?	?				
1	YES	NO	NO	YES	NO	NO	100			
2	YES	NO	NO	YES	NO	YES	95			
3	YES	NO	YES	YES	NO	YES	90			
4	YES	NO	NO	YES	YES	NO	85			
5	YES	NO	NO	YES	YES	YES	80			
6	YES	YES	NO	YES	YES	NO	75			
7	YES	YES	YES	YES	YES	YES	65			
8	YES	NO	NO	NO			50			
9	YES	NO	YES	NO			45			
10	YES	YES	NO	NO			35			
11	YES	YES	YES	NO			30			
12	Irrigated production	on not feasible, but	rainfall adequate	for dryland	A		25			
	production in both	n drought and non-	drought years							
13	Irrigated production	on not feasible, but	rainfall adequate	for dryland			20			
	production in non	-drought years (bu	t not in drought ye	ars)						
14	Neither irrigated r	Neither irrigated nor dryland production feasible								

NOTES

Part 3. Surrounding Agricultural Land Use Score:

- (1) Calculate the project's Zone of Influence (ZOI) as follows:
 - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.
 - (b) a second rectangle is then drawn which extends <u>one quarter mile</u> on all sides beyond the first rectangle.
 - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.
- (2) Sum the area of all parcels to determine the total acreage of the ZOI.
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.
- (5) Determine the Surrounding Agricultural Land Score utilizing the <u>Surrounding Agricultural Land Scoring Table</u> below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Surrounding Agricultural Land Score in box <5> of the Final LESA Score Sheet on page 10-A.

Site Assessment Worksheet 3. Surrounding Agricultural Land and Surrounding Protected Resource Land

A	<u>B</u>	C	F	G		
			Surrounding			
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)	Surrounding Agricultural Land Score (From Table)	Protected Resource Land Score (From Table)
180	475	40	97	22	200	\circ

160 175 175

NOTES

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

- (1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
- (4) Determine the Surrounding Protected Resource Land Score utilizing the <u>Surrounding Protected Resource</u> <u>Land Scoring Table</u> below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI	Protected Resource
Protected	Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Protected Resource Land score in box <6> of the Final LESA Score Sheet on page 10-A.

NOTES

Final LESA Score Sheet

Calculation of the Final LESA Score:

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
 (4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

(5) script the French of Rest	Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors			
Land Capability Classification	<1> (el.2	0.25	15.3
Storie Index	<2> 58.4	0.25	14.6
LE Subtotal		0.50	29.9
SA Factors			
Project Size	<3> /O	0.15	1.5
Water Resource Availability	<4>	0.15	12.75
Surrounding Agricultural Land	<5> HOO	0.15	15
Protected Resource Land	<6>	0.05	0
SA Subtotal		0.50	29.25
		Final LESA Score	59.15

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.

Appendix A. California Agricultural LESA Worksheets

NOTES

Site 4

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

- (1) Determine the total acreage of the project.
- (2) Determine the soil types within the project area and enter them in Column A of the Land Evaluation Worksheet provided on page 2-A.
- (3) Calculate the total acres of each soil type and enter the amounts in Column B.
- (4) Divide the acres of each soil type (Column B) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in Column C.
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in Column D.
- (6) From the <u>LCC Scoring Table</u> below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	ı	lle	lls,w	llle	llis,w	IVe	IVs,w	V	VI	VII	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (Column C) by the point score (Column E) and enter the resulting scores in Column F.
- (8) Sum the LCC scores in Column F.
- (9) Enter the LCC score in box <1> of the Final LESA Score Sheet on page 10-A.

Part 2. Storie Index Score:

- (1) Determine the Storie Index rating for each soil type and enter it in Column G.
- (2) Multiply the proportion of each soil type (Column C) by the Storie Index rating (Column G) and enter the scores in Column H.
- (3) Sum the Storie Index scores in Column H to gain the Storie Index Score.
- (4) Enter the Storie Index Score in box <2> of the Final LESA Score Sheet on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

_ A	В	С	D	E	F	G	H
Soil Map	Project	Proportion	LCC	LCC	LCC	Storie	Storie
		of					Index
Unit	Acres	Project Area		Rating	Score	Index	Score
lc_	.11	.601	TTS-	560	ь (Ф	41	641
Ge	1.67	,06	IL5~1	600	4.8	45	3.9
HC	10.58	. 58	I s	580	46.4	53	30.74
GC	191	.	IIs-	4 90	8.8	86	9.46
1e	4.3A	.24	T	6080	19.2	90	21.6
					•		
	_	(Must Sum		LCC		Storie Index	
Totals	9	to 1.0)		Total Score	79.8	Total Score	66.11

Site Assessment Worksheet 1.

Project Size Score

	ĺ	J	K
	LCC Class	LCC	LCC
		Class	Class
	I - II	III	IV - VIII
		.11	
	1.07		
	10.58	 -	
	1.91		
	4.34		
Total Acres	17.9	11.	
Project Size Scores	30	0	

Highest Project Size Score

30

NOTES

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:

- (1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column I, J or K** that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
- (2) Sum Column I to determine the total amount of class I and II soils on the project site.
- (3) Sum Column J to determine the total amount of class III soils on the project site.
- (4) Sum Column K to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the <u>Project Size Scoring Table</u> below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Clas	s III	Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

(6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Part 2. Water Resource Availability Score:

- (1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.
- (2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. Water Resources Availability**.
- (3) Determine the proportion of the total site represented for each portion identified, and enter this information in Column C.
- (4) Using the <u>Water Resources Availability Scoring Table</u>, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.
- (5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.
- (6) Sum the scores for all portions to determine the project's total Water Resources Availability Score
- (7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

	6	5	4	3	2	1	Portion	Project	A
						Irrisation state	Source	Water	В
(Must Sum to 1.0)	:					1.6	Project Area	Proportion of	ဂ
Total Water Resource Score						30	Score	Water Availability	D
9 9						85	Score (C × D)	Weighted Availability	ш

Water Resource Availability Scoring Table

		Non-Drought Year	rs						
Option		RESTRICTIONS		RESTRICTIONS			WATER RESOURCE		
	Irrigated	Physical	Economic	Irrigated	Physical	Economic			
	Production	Restrictions	Restrictions	Production	Restrictions	Restrictions	SCORE		
	Feasible?	?	?	Feasible?	?	?			
1	YES	NO	NO	YES	NO	NO	100		
2	YES	NO	NO	YES	NO	YES	95		
3	YES	NO	YES	YES	NO	YES	90		
4	YES	NO	NO .	YES	YES	NO	85		
5	YES	NO	NO	YES	YES	YES	80		
6	YES	YES	NO	YES	YES	NO	75		
7	YES	YES	YES	YES	YES	YES	65		
8	YES	NO	NO	NO			50		
9	YES	NO	YES	NO			45		
10	YES	YES	NO	NO			35		
11	YES	YES	YES	NO			30		
12	Irrigated production	Irrigated production not feasible, but rainfall adequate for dryland							
	production in both	production in both drought and non-drought years							
13	Irrigated production	Irrigated production not feasible, but rainfall adequate for dryland							
	production in non-	-drought years (bu	t not in drought ye	ars)					
14	Neither irrigated r	Neither irrigated nor dryland production feasible							

NOTES

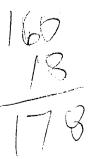
Part 3. Surrounding Agricultural Land Use Score:

- (1) Calculate the project's Zone of Influence (ZOI) as follows:
 - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.
 - (b) a second rectangle is then drawn which extends <u>one quarter mile</u> on all sides beyond the first rectangle.
 - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.
- (2) Sum the area of all parcels to determine the total acreage of the ZOI.
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.
- (5) Determine the Surrounding Agricultural Land Score utilizing the <u>Surrounding Agricultural Land Scoring</u> Table below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Surrounding Agricultural Land Score in box <5> of the Final LESA Score Sheet on page 10-A.



Site Assessment Worksheet 3.
Surrounding Agricultural Land and Surrounding Protected Resource Land

A	В	C	D	E	F	G
			Surrounding			
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)	Surrounding Agricultural Land Score (From Table)	Protected Resource Land Score (From Table)
178	170	0	96		100	\bigcirc

NOTES

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

- (1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
- (4) Determine the Surrounding Protected Resource Land Score utilizing the <u>Surrounding Protected Resource</u> <u>Land Scoring Table</u> below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI	Protected Resource
Protected	Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Protected Resource Land score in box <6> of the Final LESA Score Sheet on page 10-A.

NOTES

Final LESA Score Sheet

Calculation of the Final LESA Score:

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
- (4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

(5) Entry the Prolected Press	Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors			
Land Capability Classification	<1> 79.8	0.25	19.95
Storie Index	<2> (o(o, 1)	0.25	16.53
LE Subtotal		0.50	36.48
SA Factors			
Project Size	<3> 30	0.15	4.5
Water Resource Availability	<4>	0.15	12.75
Surrounding Agricultural Land	<5> 100	0.15	15
Protected Resource Land	<6>	0.05	0
SA Subtotal		0.50	32.25
a basanisan samuan		Final LESA	
		Score	68.7

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.