May 23, 2009

DOCKET
07-AFC-8
DATE MAY 23 2009
RECD. JUN 03 2009

San Luis Obispo County
Board of Supervisors

RE: Carrizo Energy Solar Farm
Docket# 07-AFC-08
Water & Traffic on Hwy 58

Submitted By:

John A. Ruskovich, Intervener
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Dear Board of Supervisors:

My name is John Ruskovich and I am an Intervener in the Carrizo Energy case, I would like to report my findings of URS's and Carrizo Energy's revised Hydrology and Hydrogeology Report. This information must be accepted by Carrizo Energy, as the Energy Commission requested that I do this at the August 5, 2008 workshop held in the Carrisa Plains (**Attachment A**, page 124 of the written transcript submitted by Peter Shorthand reporting). From the very beginning of this process, until December of 2008 Carrizo Energy has stated that they are only going to use 20 acre feet of water per year. Even when asked at workshops about their construction volume of water usage they continued to state 20 to 21 acre feet. **(Reference March 12, 2008 workshop, page 69 between Mr. Scott, Ms. Luckhardt, and Mr. Lindley that no more than 21 acre feet per year would be used)**. It was brought up that Carrizo Energy could not use more than 65 acre feet in any 3 consecutive years. Look at the opening flyer that states the first year Carrizo will use 47 million gallons of water, the second 23.6 million, and the third 12.5 million, and this is just in the construction period. That is why it is so crucial to get a proper and accurate water analysis done.

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At the current time, San Luis Obispo County is doing a Drought Disaster Survey were my conclusion is that I am only running about 30 percent of normal livestock in the Carrizo Plains. That is another reason why this water information is so important, because Carrizo Energy is the only one coming up with conclusion that you can pump water, as much as you want, out of the ground and let's don't worry about our neighbors.

At the end of this we will briefly touch on how Carrizo Energy has waived on the condition of Hwy 58 and have ignored the local residences concerns on the volume of construction travel on this substandard State Hwy.

The CEC requested in their Data Request, Set 4 Question 124 (**Attachment B**) requesting that the existing property owners wells on the Carrisa Plains be revised. This request was made by Mark Lindley. Carrizo Energy never complied with this request. This was partly because of the inaccuracies of their reports. One of these reports is the Triton Report submitted by Kenny Tab, which states that in 2002 a well of 111 feet deep in the center of section 11 (location 1) and in the southeast corner another well was drilled at 580 feet deep (location 4), and on section 14 a well was drilled 275 feet, and resulted in a 100 gallon per minute well (location 6). Carrizo Energy needs to remove the 11 pages of this report.

I own section 11, 13, and 14 and state that this was NEVER DONE, THESE WELLS DO NOT EXIST. That fact in itself makes this report invalid. I stated this fact at the August, 2008 Workshop (**Attachment C** - page 114 of the workshop transcript submitted by Peter Shorthand reporting).

In my Data Request Set 1, dated March 15, 2009, one of my questions was the conclusion of 14 acre feet of water that Mr. Tab uses which was reported in the Hydrology Report. I asked, how did they come up with this information? Carrizo Energies answer was, basically, Carrizo does not have any information regarding Mr.

Tabs operation and that it is not relevant to the AFC proceedings. (**Attachment D**) Carrizo Energy needs to remove the 31 pages of inaccurate and false documentation.

So, all information provided by Mr. Tab, owner, of the California Valley Hotel & Restaurant should be removed from Carrizo's Hydrology Report, a total of 44 pages.

At the August 5, 2008 workshop (page 99-100 of the transcript), Susan Cochrane stated that there were two big wells on section 28, a 1000 and a 1200 gallon per minute well. Check all County Records since this is totally false information. She also states that it is not been irrigated for the last 5 or 6 years. You can check with the USDA Office in Templeton, CA. and find out that, that land had not been irrigated for about 20 years. There are no power lines to the well. No Main Line, Sprinklers, etc. This is very easy to verify. **(Attachment E)**

Again at the August 5, 2009 workshop (page 112) Mark Lindley states to Robin Bell that he wants to see the applicant include a monitoring program to monitor the ground water and quality so that they do not impact the upper aquifer. **(Attachment F)**

In my Data Request Set 1, dated March 15, 2009, I requested that my well, as well as those of other residences neighboring this project be monitored. Carrizo Energy's Attorney blew me off. All we want is protection on our water so we don't run out, since we live 2 miles downstream from this project and do not have any other source of water. Livestock without drinking water - and I am out of business.

Arco Well Project Rebuttal

Carrizo Energy has come to the conclusion that a long-term withdrawal of the Acro Project Well (Bechtel 1984) 115gpm occurred and had no noticeable impacts to groundwater levels on the Carrisa Plains. Also, Carrizo Energy stated that this well ran from the mid 1980's to the late 1990's. (**Attachment G** – referencing the following

documents: December 15, 2008 Workshop transcript page 63, lines 14-19 & page 79; URS's AFC Volume I, Environmental Information, Section 5.5-5, dated October 2007).

After many conversations we have tried to prove to them that this Well NEVER ran. Today we now have proof that it went through a 3 day pull down and other than that, was NEVER used on the Project. But URS/Asura/Carrizo Energy will not listen to any of the information/facts we put in front of them. Instead, they rely on the tactics of their highly paid attorney.

(please note that attachments G & H will be all documents regarding Arco Solar)

(**Attachment H** – documented proof - April 14, 1982 and September 23, 1982 letters titled "Arco Solar Thermal Project" regarding proposed drilling of Well.)

On-Line you can find that in 1983 Acro Solar build a 120 acre, unmanned Photovoltaic cell Solar Plant (DRY). In the 1984 grass year sheep were placed on the site for grass control. Then a year after the plant was built they drilled for water. For Phase Two, a Thermal Solar Plant was proposed. The Beck Family who sold Section 27 to Arco was contacted to maintain grasses by mowing and to do small repairs. Greg Beck was always interested in the project and work on and off from the beginning. (**Attachment H** – email letter from Greg Beck).

By April 1995 the Plant was scrapped. It was only a dry Photovoltaic Solar Plant – Get It!

You can call or write to Greg Beck and he will explain the large Well was never used after the 72 hour test. I have proof from three other people that I will be bringing to the Final PSA.

At the Evidentiary Hearing I intend to have Greg Beck and Sheree Washer, Calfiornial Valley Community District Manager, and two others who worked at the Acro Solar Plant

testify that the 115 gallon per minute Well, which only ran for the 72 hour pump down test. Carrizo Energy needs to remove the 42 pages from the Arco Site Groundwater Analysis, since they are taking them at 100 percent out of context.

Carrizo Energy needs to start over with their water study. Perry Fountana agreed that the proposed Well was not tested in February 2008. Since then the pump has disappeared, sometime around December 2008. What happened to this pump that is on Section 28. If it ran like they said it did on a pump down test, then why for the past six months has it been in a repair shop in Bakersfield. It can not be verified that this 4 hour pump down test was done since Carrizo Energy cannot place a submergible pump with the turbine well mounted on top of the casing and no sign of water discharge could be found on February 16, 2008. This report that is 43 pages should also be removed from Carrizo Energy's Hydrology Report. Also, this is why the Ken Tab Triton Report that is full of false information needs to be removed. Also, Jane Luckhardt states that they do not care what Mr. Tab reports that it does not affect their project. But Carrizo Energy's Hydrology Report is riddled with his false information. They need to stop using the 40 year old Kemnitzer Hydrology Reports. 75 pages of analysis done before January 1967, along with oil and gas core findings relating all the way back into the 30's. They need to be required to do what Bolthouse Farms did in 2008, which was run a ground water test. Yes; they spent $100,000.00 and they looked on 5 different sections of land to see if they could find enough volume of water to plant on just 1 section for Carrots. The sections were: 30/18E, section 2, 3, 10, 11, and 15. **They did not find the volume required.** Also, the other Solar companies looking at the Plains either have or are going to be drilling Wells. Sunpower Project's Well test was only able to get between 25 & 40 gallons per minutes. The County is accepting it at 60 gallons per minute – INTERESTING, don't you think. How much water does everyone think we have on the Plains since our normal rainfall is less than 8 inches per year. Also, Carrizo Energy needs to use current rain and weather information. They only used information from 1938 to 1994. Nothing more current was used. Another 44 pages of outdated or simulated graphs. Current information must be used in these reports to make them viable. There is no long term irrigation out here and we are in our fourth year of

continuous drought. Just ask the County Ag Department. If the volume of water was here then I would be irrigating on my own ranch instead of having two collapsed 500 gallon per minute Ag Wells that are obviously no longer in use. Both Wells are on Section 13 and I would also enjoy owning the 100 gallon per minute Well on Section 14 that reports state that I have; were in reality I do not. A current and honest revised Hydrology Report should be created by removing 204 pages of false and very outdated and simulated information.

The Carrizo Energy Laydown

I again ask why they need 380 acres. I am not the only one that believes this is too much land, but then the County of going to allow them to have Work Camps. Carrizo Energy will let 400 employees camp for over 3 years on the Laydown site. This is more water to be used. With Sherriff Station and Hospital over 60 miles away, no Garbage or Sewer and Volunteer Fire Department. Smart Idea!!

State Hwy 58

Substandard State Hwy 58 with a 30 Kingpin to Rear Axle Bridge Law. Carrizo Energy's response was they will run legal height 65 foot trucks on this road. When ask how, they stated, because we will!!

LET THE ACCIDENTS AND LAWSUITS BEGIN!!!!!

Mitigation Land

If all three Solar Projects are a law at 5 to 1 mitigation the County could lose more than 40 to 50 sections of Ag Land and Tax base. Can the County afford to lose another 30,000 acres of taxable land.. Tin this time of money problems Solar Energy is Tax Exempt and Sam Blakeslee would like to see all mitigation land go to the Nature Conservancy. Why, because his wife works for them.

Now Sun Power wants a surface Mine, this is really environmentally friendly!!

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Just to let the County know, Carrizo Energy does not want to work with anybody that is against their project. When they didn't like the information that I was providing them, they ran to the Governor, who signed an Executive Order to fast track solar to close the Discovery Period as of June 16, 2008. Just so they do not have to answer any of my questions. (**Attachment J**). Even though at the April 12, 2008 Workshop in Santa Margarita, Mr. Nick Bartsch, then CEC's Public Advisor, states on page 6 of the Transcript, quote:

> "participating as an interested party, providing verbal comments, written comments all along the way in this at least one-year process."

In conclusion, because of the lack of concern on these and many other issues from Carrizo Energy and the Energy Commission and no help from Sam Blakeslee, we could be forced to turn this situation over to an attorney. Plus, it could cost us at least 50 thousand dollars to do what our local representatives should have done for us – that is – to protect the people in the Carrisa Plains. I ask Supervisor Patterson to remember his documented comments about what is happening to the Santa Margarita Ranch. The county is currently in a lawsuit over their irresponsible decisions they make on other land in San Luis Obispo County that is not in the limits of San Luis Obispo City. The county should be prepared for the lawsuit they will encounter if they do not start representing all their citizens in San Luis Obispo County.

Sincerely,

John A. Ruskovich

c: John Kessler
Elena Miller
Sean Kiernan

Attachments

ATT A
Aug. 5, 2009
Workshop

the amount of dust suppression and the amount of water that we use for dust suppression is included in the construction impacts, yes, it is.

Just to correct one thing the 90 percent rate is for fugitive dust control not for the amount of water in the soil. I think the amount of water in the soil is something like 15 percent.

But, yes, it has been included in the construction, water use amounts. It is less than the amount of water that will be used during operation. And so, as a worst case, the analysis is done on operations use, because that's the higher use.

The onsite water for construction will be the wells. That will be the source of the water. That was one of the questions that was asked.

Let's see, Mr. Ruskovich had a variety of comments about the well data, so we asked that he provide that to Bob so that we can get that corrected.

I know we got some information from Mike Strobridge -- I was trying to get which one

MR. STROBRIDGE: Mike.

MS. LUCKHARDT: -- on the well capacity,

March 12th 2008 Cannizzo Workshop

ATH A

applicant and at the meeting we had in January was the concern over water use and quantity of water that's going to be drawn from the groundwater aquifer.

And then another thing that came up was that the site was going to be landscaped around the fringe or the perimeter of the site. And I was wondering if the water use estimate of 22 acrefeet per year that's included in the AFC, if that includes any irrigation for the landscaping onsite. And whether that number needed to be revised to account for that irrigation.

MS. LUCKHARDT: Okay, before we get into that specific question, which I appreciate and I'll have these guys introduce themselves again and respond to, we need to clarify one thing.

In determining the peak water usage for the project we found an error in the numbers that were provided in the AFC and in the initial data responses. The numbers that were in that showed a maximum daily use of 700,000 gallons per day. That number is incorrect. the correct number is 74,000 gallons per day. That is the approximately once-a-year occurrence. That is the maximum water use for one day.

In addition, the average daily water use --

MR. SCOTT: Yeah, that's for the entire year, but --

MS. LUCKHARDT: -- for the entire year - -

MR. SCOTT: -- 13 gallons per minute.

MS. LUCKHARDT: But that's not changed.

MR. SCOTT: No.

MS. LUCKHARDT: That hasn't changed. Yeah, just the acrefeet per year was listed at 21.8 acrefeet per year. The corrected value is 20.8, or rounded up to 21.

MR. LINDLEY: Okay --

MS. LUCKHARDT: And then I'll let --

MR. LINDLEY: -- 20.8 acrefeet per year.

MS. LUCKHARDT: Right.

MR. LINDLEY: And that's your average annual water use, or your projected maximum?

MS. LUCKHARDT: That is the average. The projected maximum daily was the earlier one.

MR. LINDLEY: Okay.

MS. LUCKHARDT: Okay, and then I'll let these guys respond to your question.

MS. HOLMES: Excuse me, Jane, sorry --

WATER ISSUES OVERDRAFT AND NO WATER TESTS KEMNITZERS REPORT 40 YEARS OLD BETCHELL REPORT 25 YEARS OLD THE 2001 WATER PLAN STATES THE CARRIZO BASIN NEEDS A STUDY BECAUSE TRUE PERENIALL YIELDS ARE UNKNOWN ALSO STATES THAT THE KEMNITZERS REPORT IS OUTDATED

1st year 143.87 afy 47 million gallons

2nd year 72.31 afy 23.6 million gallons

3rd year 37.98 afy 12.5 million gallons

Life of the project 21 afy 7 million gallons per year

Optisolar for construction 3years 8.7 million gallons per year operation???

SunPower for construction 3years 11 million gallons per year and operation (life of the project) 3.5 million gallons per year

All 1st year 205afy 2nd year 134afy 3rd year 100 afy

NOISE-INNACCURATE NOISE TEST THE STATE HAD TO REDO BOLLARD ACOUSTICAL STATES THAT NOISE IS 9DB LOUDER THAN CARRIZO SAYS NEED TO MOVE POWER BLOCK URS SAYS NO BOLLARD ACOUSTICAL FINDS FAULTS IN CARRIZOS ANALYSIS SAYS POWER BLOCK STILL NEEDS TO MOVE STATES CARRIZOS REPORT IS INACCURATE. OUR AREA IS EXTREMELY QUIET!!

BIOLOGICAL WILDLIFE CORRIDOR

MANUFACTURING BUILDING 40,000SQ FT

VISUAL IMPACTS 115FT HIGH CONDENSOR BUILDINGS MAXIMUM IN AG LAND 35FT

WILL COMPLTETLY BLOCK THE VIEW OF THE MOUNTAINS

CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 4

Technical Area: Water Resources
Author: Mark Lindley

WATER RESOURCES AND WATER SUPPLY

At the August 5, 2008 Data Response and Issue Resolution Workshop, the applicant committed to revise or supplement the "Hydrology and Hydrogeology of the Vicinity of the Proposed Carrizo Energy Solar Farm (CESF), San Luis Obispo County, California" dated June 26, 2008. In the following data requests, CEC staff requests that the applicant, in the process of revising and supplementing that report, examine cumulative impacts associated with groundwater withdrawal at CESF and the neighboring Topaz/Opti-Solar facility planned for areas north and east of the CESF Site. Also, as discussed at the workshop, estimates of average annual runoff utilizing runoff coefficients that are more appropriate for typical daily rainfall depths would result in more accurate and reliable analysis. The following data requests are intended to assist the applicant in revising and supplementing the Hydrology and Hydrogeology report to address the potential cumulative impacts and other comments from the workshop.

BACKGROUND

SURFACE WATER HYDROLOGY

In the surface water analysis that appears in the "Hydrology and Hydrogeology of the Vicinity of the Proposed Carrizo Energy Solar Farm (CESF)", evaporation and evapo-transpiration were together identified as one of the primary causes of water loss in the Carrizo Plain. The CESF would include mirror panels shading up to 90 percent of the site surface. This shading would inhibit plant growth and limit evaporation/evapo-transpiration rates from the project site after construction as compared to current rates.

Data Requests

122. Please provide an estimate of the difference between anticipated evaporation/evapo-transpiration rates at the CESF site under (a) existing conditions and (b) following construction. Please factor in this estimated change in evaporation/evapo-transpiration in an updated analysis of surface water balance, including estimated recharge and runoff from the site.

123. Please revise the estimates of average annual runoff utilizing runoff coefficients that are more appropriate for typical daily rainfall depths. Please use the Soil Conservation Service Curve Number approach with at least 5 to 10 years of daily rainfall records to yield better estimates of average annual runoff.

BACKGROUND

GROUNDWATER / HYDROGEOLOGY

The groundwater model included in the "Hydrology and Hydrogeology of the Vicinity of the Proposed Carrizo Energy Solar Farm (CESF)", assumes that wells on the Carrizo Plain are pumping at about 12 gpm (19 ac-ft/yr) or at their maximum pumping rate with a 35 percent duty cycle. These assumed pumping rates appear much higher than

staff's understanding of local pumping rates on the Carrizo Plain. Local experience indicates that pumping rates used in the model may be an order of magnitude higher than what is currently pumped. In addition, the Topaz/Opti-Solar project proponent recently submitted information regarding its intended use of groundwater. The Topaz/Opti-Solar facility states that it intends to utilize approximately 23,910 gpd (26.7 ac-ft/yr) over three years of construction and approximately 3,060 gpd (3.5 ac-ft/yr) during operations.

Data Requests

124. Please revise the assumed groundwater pumping rate for wells identified in the Carrizo Plain based on known pumping rates within the plain from data collected from existing property owners. Please ensure that all revised assumed pumping rates reflect the typical water use requirements in the Carrizo Plain for dry farming, rangeland cattle ranching activities (1 head of cattle per approximately 10 acres), and household water use (~0.5 to 1 ac-ft/yr).

125. Please provide groundwater model results using the revised pumping rates and revised recharge rate determined in the surface water analysis for the following:

a. the existing no-project scenario;
b. a CESF pumping scenario; and
c. a CESF + Topaz/ Opti-Solar scenario to help assess potential cumulative impacts of ground water withdrawal from the two proposed projects.

Aug 5 workshop
A.H. C.

properties.

Then I received a copy of the report on the water wells in this area. First off, on the historical use of the groundwater you have, at one time on the, I call it section 33 or the Lotta Cain piece, there was 1000 to 1200 gallons per minute well.

Well, if you look back on the current reports, the pre-56 reports, or the after-56 reports, there's never been a well on that property larger than 600 gallon per minute. So this report is a mistake.

Then you go on, this is the current survey. Okay. Let's get down to my property. Well, you have an unknown well on section 11 that's not there. You have 111-foot well, and then an unknown well. And then on section 14 I have a 100 gallon per minute well, and an unknown well. And then on section 13 I have either four or five wells. I've lost track.

Every report's a little different. Well, this is the accurate report I will give you. I have one working well, 20 gallons per minute, not 500, not 100, not 110 feet in section 11. There is no wells in section 11. And the only

well on section 13 of mine is a dead well.

So, definitely you need to come back out and do your survey again. And this time maybe if the kid doesn't like the results, you need to just publish them the way the residents say.

Because it's the report that you have from Kenny Tabattabay (phonetic) that has location 1 through location 9, okay. This is a report that you filed. It's online or I don't know.

This is the wells, okay, the drilled wells in 2002. I will swear on the Bible these wells results never happened because these wells were never drilled.

That's just on my property. I don't know what they've done on the other properties. But my history out here is kind of saying the well reports are a little off.

Now, also on February 15th you said you pumped 18,000 gallons of water out of the proposed well on section 33. I'd like to know who pumped that water; and was that out of the turbine well in the center of the field?

If it was, how big a generator did they bring? Because there's no power lines to that well. In your report you state you pulled it down

ATT. C.

Table 3-1
Summary of Available Well Completion Data
(Continued)

Township, T##S	Range, R##E	Section	Quarter/ Other Indicator	Zone	Northing	Easting	Approx. Depth to Water (feet)	Approx. Well Depth (feet)	Depth of Screen Interval (feet - feet)	Approx. Pumping Rate (gpm)
---	---	---	---	10S	772383	3912938	15	600	100-600	100
---	---	---	---	10S	772346	3912871	15	600	100-600	100
---	---	---	---	10S	227726	3914824	18	120	100-120	20
---	---	---	---	10S	227726	3914824	18	120	100-120	20
---	---	---	---	10S	227726	3914824	18	120	100-120	25
---	---	---	---	10S	227391	3915931	20	150	80-150	20
---	---	---	---	10S	228532	3915275	20	160	100-160	8
---	---	---	---	10S	228532	3915275	20	80(?)	UNK	8
Other Available Well Completion Data										
29	17	25	---	---	---	---	155	263	180 - 260	15
29	17	25	---	---	---	---	177	300	140 - 300	10
29	18	16	---	---	---	---	37	150	55 - 151	UNK
29	18	18	---	---	---	---	18	150	72 - 150	UNK
29	18	28	---	---	---	---	30	630	75 - 630	500
29	18	29	---	---	---	---	10	610	100 - 360	300
29	18	29	---	---	---	---	15	260	115 - 255	150
29	18	29	---	---	---	---	20	250	130 - 250	150
29	18	29	---	---	---	---	15	340	40 - 300	300
29	18	30	---	---	---	---	30	263	100 - 260	150
29	18	30	Lot1	---	---	---	60	200	40 - 195	50
29	18	30	Lot2	---	---	---	40	180	60 - 180	75
29	18	30	Lot3	---	---	---	40	175	55 - 175	75
29	18	30	Lot4	---	---	---	55	160	40 - 160	50
29	18	33	---	---	---	---	44	103	43 - 103	UNK
29	18	34	---	---	---	---	UNK	460	155 - 380	UNK
29	18	34	---	---	---	---	15	102	42 - 102	UNK
29	18	34	NE1/4	---	---	---	40	204	66 - 204	UNK
29	18	35	---	---	---	---	15	160	60 - 160	200
29	19	19	NE1/4	---	---	---	26	101	30 - 102	UNK

Table 3-1
Summary of Available Well Completion Data
(Continued)

Township, T##S	Range, R##E	Section	Quarter/ Other Indicator	Zone	Northing	Easting	Approx. Depth to Water (feet)	Approx. Well Depth (feet)	Depth of Screen Interval (feet - feet)	Approx. Pumping Rate (gpm)
29	19	19	W	---	---	---	18	58	18 - 58	UNK
29	19	21	SW1/4	---	---	---	22	98	38 - 98	UNK
29	19	27	NE1/4	---	---	---	36	126	0 - 126	UNK
30	18	1	N	---	---	---	42	106	50 - 102	20
30	18	1	---	---	---	---	75	140	70 - 130	UNK
30	18	1	N	---	---	---	38	150	40 - 141	30
30	18	10	---	---	---	---	15	160	20 - 160	70
30	18	11	---	---	---	---	63	111	63 - 111	UNK
30	18	12	---	---	---	---	UNK	520	100 - 520	UNK
30	18	13	---	---	---	---	55	170	110 - 170	30
30	18	13	---	---	---	---	30	160	60 - 160	UNK
30	18	14	---	---	---	---	18	285	95 - 275	100
30	18	17	---	---	---	---	38	300	60 - 275	70
30	18	24	---	---	---	---	35	100	50 - 100	UNK

Notes:
Wells identified during the survey with well data are shown in yellow on Figure 3-3.
UNK: Unknown

3.4 AVAILABLE WELL INFORMATION

Publicly available well information for the Carrizo Plain is limited. The information provided below relies on the following:

- Kemnitzer (1967).
- Proposed pumping well data on the site.
- Data appearing in a hydrogeologic report prepared for the formerly adjacent ARCO solar facility.
- Well information provided by Mr. Kenny Tab for California Valley that is greater than 3 miles from the site (Tab 2008).
- Well information provided by Mr. John Ruskovich following the August 5, 2008 Workshop.

These data are provided in Appendices B. D and E.

TABLE 8.- List of water wells in the Carrizo Plain area, San Luis Obispo County, California, January 1, 1967, by township, range, and section

Township-Range Sec.-well no.	Property or owner	Year completed	Total depth (feet)	Depth to water (feet)	Water level above sea level (ft)	Rated capacity (gpm)	Remarks
T28S-R17E							
S17-C1							Windmill
S18-L1							Windmill
S22-F1							Domestic 1/
T28S-R18E							
S18-A1							Pinole Spring
S20-C1	W.Wreden	pre-1958	105	48	2,302	-	Windmill
S20-E1	W.Wreden	-	-	-	-	-	Windmill
S28-H1		pre-1958			2,405		Windmill;not in
S34-A1	W.Wreden						Windmill
T29S-R17E							
S2-F1							Carnaza Spring
S11-H1	H.Wredeh	pre-1958	200	40	2,030		Irrigation
S13-R1	R.Cooper	pre-1958	200	35	2,006	100	Irrigation
S25-J1		pre-1958	80	59	1,994		Windmill
T29S-R18E							
S14-D1	C.Wreden						Mustang Spring
S16-M1	Polin	pre-1958	100	37	2,043		Domestic
S20-E1	Polin	pre-1958	-	19	2,015		Windmill;not in
S21-P1	Lewis	pre-1958	70	35	2,005		Windmill
S28-G1	King	1964					Irrigation
S28-K1	W.King	pre-1958	500				Irrigation;abd.
S28-L1	W.King	pre-1958	175	31			Domestic
S28-L2	King	pre-1958	325				Irrigation;abd.
S28-L3	King	1965	600				Irrigation
S29-E1	Lewis	pre-1958	700	36	1,995	500	Irrigation
S30-N1	Garcia	1918	80				Domestic
T29S-R19E							
S31-F1	Beck	pre-1958	16	10			Domestic
S31-F2	Beck						Thompson Spring
T30S-R18E							
S1 -B1							
S1 -B2							
S1 -G1							
S1- D1		pre-1958					Domestic
S1 -L1		pre-1958					Domestic
S2 -D1		pre-1958					Irrigation
S3 -E1	King	pre-1958	300	41	1,944	600	Irrigation
S3 -D1	F.King	pre-1958	600	22	1,978	1,100	Irrigation
S4 -B1							
S9 -B1							
S12-N1	Chilcote	1963	550				Community
S13-M1	Smith	pre-1958	285	13	1,968	500	Irrigation
S14-A1							
S14-A2		pre-1958					

(Continued...

1/ "Domestic" includes household, livestock, etc.

DROUGHT DISASTER SURVEY - SAN LUIS OBISPO COUNTY

We need your help gathering statistics to determine the extent of damage in San Luis Obispo County from continuing drought conditions. To apply to the State Office of Emergency Services for an emergency declaration a threshold of loss of at least 30% (averaged for all rangeland grown in the entire SLO County) needs to be determined. The declaration may provide disaster assistance. (Some federal assistance programs have a 50% threshold of loss). We are also working with Jennifer Anderson and her staff from the Farm Service Agency to gathering information from producers.

The time period we are asking you to report is October 1, 2008 to May 15, 2009.

Please fill-out the survey below and return to SLO County Department of Agriculture by **May 22, 2009.** Incomplete surveys may not be counted! Be specific, our letter on your behalf to the State Office of Emergency Services will be much stronger if we have lots of information to work with! Individual survey information will be kept confidential.

Thank you in advance for your help. Contact Lynda Auchinachie, SLO County Dept. of Agriculture at 781-5914 if you have questions about this survey. Contact Jennifer Anderson, USDA Farm Service Agency, at 805-434-0398 Ext 2 for information about possible programs.

(*Contact information optional*)
NAME: John A. Ruskovich
MAILING ADDRESS: 13084 Soda Lake Rd. Santa Margarita 93453
PHONE NUMBER(S): 805-475-2255, 805-441-7006

DESCRIBE: FEED CONDITIONS COMPARED TO NORMAL YEAR WHAT HAPPENED, WHEN AND WHY? Had Barley crops in Back section, Bad years not profitable to Plant until Return of Better Rains, Did not Plant in 2008 or 2009 years, no March Rains 2008 & 2009 Frost after Jan. Rains

GRAZING TYPE: Rangeland, Native Grasses.	**Total Acres Grazed**	**Number of Cattle Normally Grazed (Past 5 Year Average)**	**Percentage of Cattle Grazed compared to Normal Year October 1, 2008 Thru May 15, 2009**	**LOCATION of Grazed Property: (address or description: for example north coast, Carrizo Plains, etc).**
540 Barley 1500 native grass Rangeland	2040 ACRES	206 cows Avg with Bulls Per. 2005		3 ½ sections on Carriso Plains
1420 native Grass Rangeland	1920 ACRES	42 cows with calves 3 Bulls 5 Heifers	25 to 30% of normal	3 section on Carriso Plain
	ACRES			

DEADLINE TO RETURN SURVEY: May 22, 2009

RETURN SURVEY TO: **Lynda Auchinachie, SLO Co. Dept of Ag**
2156 Sierra Way, Suite A
San Luis Obispo, CA 93401 **FAX: 805-781-1035**

carried their burden of proving good cause, and Staff recommends that the Petitions be denied.

We submit the following information in the hope that it will assist the Committee in reaching a fair and appropriate resolution of the Petitions.

B. PETITIONERS SEEK TO REOPEN DISCOVERY

It is important to note that these two Petitions, despite being named Petitions to extend the 180-day discovery period, actually seek to reopen the discovery period approximately ten months after it closed.

C. DISCOVERY CLOSED ON JUNE 16, 2008

California Code of Regulations, Title 20, section 1716 (e) provides that all requests for information shall be submitted no later than 180 days from the date the commission determines an application is complete, unless the committee allows requests for information at a later time for good cause shown. In this proceeding, the commission determined the application was complete on December 19, 2007. No party has previously sought the committee's permission to reopen or extend discovery in this matter. Thus, discovery closed by operation of law on June 16, 2008.

D. THE FEBRUARY 13, 2009 COMMITTEE ORDER

The February 13, 2009 Committee Order that granted the Ruskovich and Strobridge Petitions to Intervene expressly provides, "The deadlines for conducting discovery and other matters shall not be extended by the granting of these Petitions."

E. PETITIONERS DID NOT DISCLOSE THEIR INTENT TO FILE DISCOVERY

California Code of Regulations, Title 20, section 1207 provides in relevant part:

> (a) Any person may file with the Docket Unit or the presiding committee member a petition to intervene in any proceeding. The

two rates of pumpage were considered to conservatively bracket a range of probable irrigation pumpage within the basin.

For the base model, it was assumed that the irrigation wells identified are operated year round using a 35% duty cycle at their estimated well yield at the time of their construction. Based on information provided by Mr. John Ruskovich, some of the irrigation wells are only pumped for three months out of the year to support the cultivation of spring hay. Others are also likely to be used for only part of the year. Others may not be used at all. Furthermore, during periods of the year when wells are being used for irrigation, a 35% duty cycle likely overestimates the duration of operation. Therefore, year-round operation with a 35% duty cycle represents an upper bound estimate for irrigation pumpage that conservatively maximizes groundwater withdrawal and drawdown, and therefore, maximizes any potential impacts of the CESF project and the proposed OptiSolar project on groundwater in the surrounding area. A lower bound for irrigation pumpage was considered in sensitivity analyses. To bracket a lower bound, it was assumed that all irrigation wells were only used for three months out of the year with a 35% duty cycle. Note also that Mr. John Ruskovich informed URS that several of the irrigation wells are no longer used and the pumping rates for these wells were set to zero in all model runs. In addition, there are a number of specific wells where water use has been estimated based on land use.

Pumpage was calculated for two properties where specific land use is known. First, there is a Lower Aquifer well at the California Valley restaurant and hotel that is not used to support agriculture, located in T30S R18E Section 12. A recent discussion with the owner, Mr. Kenny Tab, indicates that the well has an estimated yield of 500 gpm and supplies water to his restaurant, hotel and provides irrigation for landscaping. The landscaping includes a 3,000-foot row of trees (assumed to occupy approximately 3 acres). Based on calculations, it is assumed that the water use from this well for irrigation and other uses is the equivalent of 26 residential homes or approximately 14 afy. There are also approximately 8 water wells that provide irrigation supply to approximately 160 acres of olive groves at La Panza Ranch, approximately 3 miles southwest of the site in T30S R18E Section 6. It was assumed that 2.5 feet/year are required for irrigation to sustain the olive groves (see data appearing in Table 1-3). Each well was designated a pumping rate that is one-eighth of the total estimated annual water demand for the groves.

Site (CESF) Pumping Well: It was assumed that the site well will pump at a rate of 144 afy for the Construction Scenario and 20.8 afy for the Project Scenario from the Lower Aquifer (Layer 3).

Hypothetical Topaz/OptiSolar Well: The combined effect of pumping from the CESF project and the proposed Topaz/OptiSolar project to the north was also evaluated as requested by the CEC. The Topaz/OptiSolar well was included because the nearest areas of that project lie within a 3-mile radius of the CESF site and there are private parcels with residential wells located between the two projects that may have the potential to be affected by groundwater pumping. Topaz Solar Farms LLC/OptiSolar, Inc. (OptiSolar) indicates in its Conditional Use Permit (CUP) Application submitted to San Luis Obispo County that groundwater will be supplied to the project from existing wells within the site footprint. The document provides no further detail on the location of the wells or the aquifer that will be pumped. To provide a conservative evaluation of the combined effect of the CESF and OptiSolar pumping wells on the surrounding area, it was assumed that: 1) the OptiSolar well is located near the CESF site in a location where there are residential wells between the two proposed sites and, 2) the well will be pumping

F. Response to Data Request 6

Data Response 6 provides that "the Hydrology Report states that the applicant is planning on buying additional water and hauling it in two water trucks in a 30 minute time frame roundtrip." Mr. Ruskovich asks: "Since this is on the Carrisa Plains, who are you going to buy this water from? And where are the Wells located at that this water will be pumped from?"

Carrizo responds that all of the untreated raw water for the Project will be drawn from the existing well on the Project site. (Carrizo Hydrology Report § 1.1.) Trucking of water to the Project site would only occur in the event of an operational issue with the well pump. (Carrizo Hydrology Report § 1.2.2.) Water will not be pumped from the onsite well for use offsite. The only water that Carrizo plans to bring in from offsite is potable water for consumption. (*See* Appendix A.)

G. Objections to Data Request 7

Data Request 7 asks Carrizo to provide specific information regarding the California Valley Restaurant and Hotel, owned by a Mr. Tab, including the weekly operations schedule, the number of rooms and average nightly occupancy, the square footage of the irrigated lawn area, and information regarding the irrigation of trees planted at the property.

1. Data Request 7 Asks for Information that is Not Relevant to the AFC Proceedings.

Carrizo does not have specific information regarding restaurant operation, hotel accommodations and average night occupancy, lawn acreage requiring irrigation, and duration for tree irrigation. Carrizo objects to this data request because it seeks information which is not relevant to the AFC proceedings. As discussed above, the law of civil discovery requires a discovery request to seek matter which is "relevant to the subject matter involved in the pending action or to the determination of any motion made in that action...." (Cal. Code Civ. Proc. § 2017.010.) "Relevance" may vary with size and complexity of the case and must be considered with regard to the burden and value of the information sought (among other factors). (*See Bridgestone/Firestone, Inc.*, 7 Cal. App. 4th at 1391.)

In this case, the value of the information sought is very low because it is only indirectly

III E

Aug 5th workshop. Conrado Hentinger

Very False report From Susan Cochrane

MR. KESSLER: Very good. Okay, I think you're up.

(Parties speaking simultaneously.)

MS. COCHRANE: The history of the property. Okay, I was also born and raised out here. My parents both went to the school house. They came here when their own parents did, I guess. Same covered wagon.

Anyway, that property, that particular piece of property, it has two wells onsite since 1944, I believe. It was intensely irrigated; they farmed potatoes there. There was two big wells. They were 1000 to 1200 gallons per minute.

The well they are using is a smaller one. It's 550 gallons per minute. And as you said, it's in a different watershed. It's not, you know, the very best water.

So every since the 1940s there has been alfalfa, seed alfalfa, carrots, potatoes. And I believe it was in the '80s it kind of went to some dry farming, and then they did carrots out there again, and you know, through a comedy of errors the well got blown out.

And so just in the last -- I think, for me, it hasn't been irrigated for maybe five or six

The Lottie King Ranch section 28 never had A well over 600 gallon look at All of the county Reports

You can check with U.S.D.A office completion and they can tell you when last irrigated

Only the Front eighty Acres ~~were~~ were irrigated

years, something like that. So, anyway, that's the history. It's just a quality piece of land that has been -- and the future --

MR. LINDLEY: I really appreciate that. You know, I think it's one thing that would be helpful if everybody in the room could realize is that I think these folks probably have a lot of technical knowledge. And I think the folks from the CEC have a lot of technical knowledge about the individual subject areas that we're all trying to discuss and address.

But one thing that I think is really difficult for those of us with the technical knowledge is that we're not necessarily from the Carrisa Plains, so it's really hard for us, coming from outside, to get a solid feel, you know. We're not going to have the kind of local knowledge that a lot of the folks in this room have demonstrated. And it's really helpful to hear from you all to gather that knowledge and take that into account.

MS. COCHRANE: And that particular piece of ground, well, when our parents took us the 18 miles to school every day, when it would flood out here, that piece of ground did not flood. It's a

Aug 5th workshop
Att F.

report for me is really over my head to have the confidence of knowing that this is going to be fine.

And I think what local residents would like to see and should happen is that Ausra needs to accept responsibility for saying that this report is true. And that should anything happen to our wells, you guys are going to take responsibility for that.

That you're bringing in new water for us, or you're relocating us or something. But I don't see how anybody can be so sure about how those aquifers pumped together to say it won't affect us. And why should we take the liability that if it does affect us.

I think part of the permitting process or requirements from the Energy Commission should be to make sure we're guaranteed that we're going to have water.

MR. LINDLEY: Robin, we're about to put out a staff assessment in the next month or so. That staff assessment is going to include our initial take on the potential conditions of certification.

Among the conditions, I haven't worked

Back page about monitoring

out the language yet, and run it through everybody yet, but some of the things that I'm thinking about requiring are that the applicant use the lower quality groundwater from the deeper aquifer.

I would like to see the applicant include a monitoring program where they would monitor depth of groundwater and water quality in the upper aquifer to make sure that we don't see an impact in the upper aquifer.

If there is an impact generally what I've seen on other projects where an applicant is proposing to draw groundwater is that they have to either pay to lower residents' wells, or compensate residents for increased pumping costs because the groundwater is lower due to their withdrawal.

I've also seen conditions that include a cap on total water use generally based on the predictions that the applicant has, so that they don't go over a certain water use without consulting with the Energy Commission, and because we're analyzing the project for potential impacts based on a given water use.

And then I'm also thinking about including something on the perimeter swale to make

Aug 5 2008
Workshop

properties.

Then I received a copy of the report on the water wells in this area. First off, on the historical use of the groundwater you have, at one time on the, I call it section ~~39~~ 28 or the Lotta Cain piece, there was 1000 to 1200 gallons per minute well.

Well, if you look back on the current reports, the pre-56 reports, or the after-56 reports, there's never been a well on that property larger than 600 gallon per minute. So this report is a mistake.

Then you go on, this is the current survey. Okay. Let's get down to my property. Well, you have an unknown well on section 11 that's not there. You have 111-foot well, and then an unknown well. And then on section 14 I have a 100 gallon per minute well, and an unknown well. And then on section 13 I have either four or five wells. I've lost track.

Every report's a little different. Well, this is the accurate report I will give you. I have one working well, 20 gallons per minute, not 500, not 100, not 110 feet in section 11. There is no wells in section 11. And the only

Ag 5 2008
Work shop.

well on section 13 of mine is a dead well.

So, definitely you need to come back out and do your survey again. And this time maybe if the kid doesn't like the results, you need to just publish them the way the residents say.

Because it's the report that you have from Kenny Tabattabay (phonetic) that has location 1 through location 9, okay. This is a report that you filed. It's online or I don't know.

This is the wells, okay, the drilled wells in 2002. I will swear on the Bible these wells results never happened because these wells were never drilled.

That's just on my property. I don't know what they've done on the other properties. But my history out here is kind of saying the well reports are a little off.

Now, also on February 15th you said you pumped 18,000 gallons of water out of the proposed well on section 33. I'd like to know who pumped that water; and was that out of the turbine well in the center of the field?

If it was, how big a generator did they bring? Because there's no power lines to that well. In your report you state you pulled it down

March 12th

site so that the applicant can report back and identify any issues as they come up.

And then also, as she discussed, we generally include a condition of approval that deals with changes or impacts to the water supply to neighboring residents that are depending on groundwater.

So, I could see two conditions of approval that would be directly related towards monitoring the situation and requiring the applicant and the power plant, once it's up and operating, to mitigate any impacts that would come up to any of the neighboring water uses or neighboring residences.

MS. HOLMES: Thank you.

MS. DYAS: Are there any other general comments, questions?

Okay, for a closing, and one thing I do want to say initially in closing is that this is by no means a done deal.

Our staff, once we complete our analysis, the stage that we're in right now, like I said, we're in the gathering data stage. Staff is going to write their analysis and put out what we call our preliminary staff assessment. And

design or operation of a project to the person who proposes it:

> The proponent of any additional condition, modification, or other provision relating to the manner in which the proposed facility should be designed, sited, and operated in order to protect environmental quality and ensure public health and safety shall have the burden of making a reasonable showing to support the need for and feasibility of the condition, modification, or provision. The presiding member may direct the applicant and/or staff to examine and present further evidence on the need for and feasibility of such modification or condition. (20 C.C.R. § 1748[e].)

Carrizo has already presented sufficient substantial evidence to support a finding that the Project will not have a significant impact on water resources, including groundwater levels in the basin. (*See, e.g.*, Carrizo Hydrology Report at § 3.6.3.2 and 3.6.3.3.) Once this has been done, the burden of proof shifts to the intervenor to demonstrate the need for further measures to address the Project's impact on water resources. Because Mr. Ruskovich has not provided sufficient information to meet this burden, no further information is required from Carrizo.

B. Objections to Data Request 2

The first part of Data Request 2 asks Carrizo to "justify why the water use in the beginning of the process of this project was stated [sic] that water usage was going to be a maximum of 21 acre feet per year of water and today, your information states 144 acre feet or 47,044,800 gallons will be used the first year alone." Mr. Ruskovich then states the water use figures for the remaining two years of construction, claiming that the total amount used during the construction period would be more than he would use in 50 years.

The second part of Data Request 2 states: "We request that part of the mitigation of the water issue be the monitoring of depths of water of local wells to safeguard our water over this project [sic]....I require that the following wells be continuously monitored for water depth and water quality." Mr. Ruskovich then lists the wells he wishes Carrizo to monitor.

1. Data Request 2 Is Not a Proper Data Request Because It Is Not a Request for Data.

The purpose of a data request is to give access to data which is reasonably available to the applicant. The Commission's regulations specify the scope of a proper request for

Dec 15th 2008
workshop

AH G

below ground surface. But that's off the top of my head, so don't hold me to that.

The lower aquifer is confined to semi-confined aquifer. And what that means is there's clay layers in the aquifer that separates that lower aquifer where the project is planning on pumping from, from the upper aquifer that most of the neighbors depend on for their water supply.

These clay layers then limit the amount of flow from the upper aquifer down into the lower aquifer, which would tend to limit any impacts on that upper aquifer that most of the neighbors depend upon from the pumping at the project site.

And then one other, when we look at that aquifer perspective, one other data point that staff considered was that the ARCO project pumped up to 115 gallons per minute and residents in the Carrisa have not indicated that that project resulted in significant groundwater impacts.

Very important to Fix!

We also looked at groundwater pumping, compared that to the amount of water that would be captured in the solar field terraces. So, as I just mentioned the grading that's planned for the site at present includes capturing a series of terraces that act as retention, detention

AH 6

hose, which is generally about 10 to 15 gallons a minute.

And the volume of water that will be used by the plant on a daily basis, 18,500 roughly, is about the amount of water in a small in-ground swimming pool that might be in somebody's backyard. So, just to give an idea of what that volume is.

Here's a plot that shows the results of our preliminary modeling evaluation. The pumping well there is at a distance zero, and you can see how the cone of depression develops away from the pumping well.

And you can see that the change in water level away from the site quickly decreases, that shows to a distance of two miles.

Now, the data, in order to run this we used some aquifer characteristic data from a pump test that was done at the former ARCO facility next to the proposed site.

MR. LINDLEY: So hydrolic conductivities would probably be relatively similar between the ARCO site and the proposed site?

MR. SCOTT: Yes, that's true. And so the values that were used are shown on the lower

AUSRA AFC Volume 1

Att. 6

5.5.2 Environmental Consequences

This section provides details on the proposed water use, availability, supply, water quality, and surface water. In summary, untreated raw water for the CESF will be obtained from groundwater via an existing onsite well. The design of the CESF minimizes use and maximizes the recovery of process water. Blowdown and an oil/water separator (OWS) clear discharge will be routed to an onsite raw water storage tank for reuse. Stormwater will be collected onsite and directed to swales and detention areas for percolation into the ground. The following sections describe in more detail the potential water resources related environmental consequences associated with the CESF.

5.5.2.1 Water Supply and Use

The Carrizo Plain Groundwater Basin will supply raw water to the CESF via an existing onsite groundwater well, which is expected to provide 100 percent of the CESF needs.

Water will be required for the following:

- Make up to the steam turbine system.
- Washing of solar system reflectors and collectors.
- Potable Water: Potable water will be supplied from a potable water skid for use by plant personnel.
- Service Water: Untreated water will be required for general site uses.
- Fire Protection.

Not true

Table 5.5-3 provides the CESF water usage rates. The amount of process water used by the CESF is expected to be reasonably uniform. The expected average daily water consumption for the plant is approximately 70 m^3 (18,500 gallons), or 21.8 AFY, based on the assumption of two units operating at full load for 13 hours per day. The expected peak water consumption for the facility is approximately 195 liters per minute (51 gallons per minute) based on full plant output for 4,765 hours per year. Total peak daily use is about 282 m^3 or 0.7 million gallons per day (MGD), based on a 13 hour operating day. Average annual raw water consumption is estimated to be 17.2 acre-feet per year (AFY). Plant water used for the CESF is shown in Section 3.0, Facility Description and Location (see Figure 3.4-17).

Raw water for CESF use will be obtained from the existing onsite well discussed above. Based upon Table 5.5-3, the average annual (39 gpm), average daily (41 gpm), and maximum daily (101 gpm) CESF water uses are below the original existing well yield of 500 gpm. Additionally, these proposed water demands are in the range of the typical well yields in the area which range from 10 to 500 gpm. Furthermore, the water usage rates and well yield are less than that of designed and operated water well usage at a nearby water well at the now dismantled ARCO Carrisa Plain Solar Project (ARCO Site).

Section 27, located adjacent and east of CESF, contained the now dismantled 177-acre ARCO Site from approximately the mid-1980s to the late 1990s. Research and testing was conducted prior to construction to determine whether the underlying Carrizo Plain Groundwater Basin could support the proposed water requirements for that project. A design long term mean of 115 gpm was proposed (maximum seasonal water requirement of 190 gpm for 4 months from June to September and 24-hour peak demands of 250 gpm). Testing on Section 27 was conducted in 1984 by Bechtel Civil & Minerals, Inc. (Bechtel). A

18,500 gallons of water per DAY

PH Ca

Staff examined potential impacts to groundwater resources from three perspectives. First, the Lower Aquifer is a confined to semi-confined aquifer with limited connection to the Upper Aquifer. Second, the project's stormwater management plans will increase infiltration of stormwater at the site increasing recharge in the Upper Aquifer. Finally, the project involves covering the majority of the project site with mirrors and solar collectors and the resulting shade will decrease vegetation growth and evapo-transpiration resulting in increased groundwater recharge and in the Upper Aquifer.

The applicant proposes to pump lower quality groundwater from the Lower Aquifer. Kemnitzer determined from well logs that in the Lower Aquifer there were lower permeability clay layers between the Lower Aquifer and the Upper Aquifer indicating that the Lower Aquifer is a confined aquifer (Kemnitzer, 1967). The Bechtel pump test report also noted the occurrence of sand and gravel water bearing layers within thick clay/silt layers and a potentiometric level above the aquifer indicating a confined to semi-confined aquifer (Bechtel, 1984). The ARCO project was specified for a long-term withdrawal of 115 gpm from the Lower Aquifer (Bechtel, 1984). Staff has not been able to locate actual pumping or water use data from the ARCO project, however, communications with longtime resident, John Ruscovich, indicate that the pumping associated with the ARCO project did not result in noticeable impacts to groundwater levels or yields on the Carrizo Plain. The conclusion that the Lower Aquifer is a confined to semi-confined aquifer indicates the Upper and Lower Aquifers are separated and pumping from this deeper aquifer is not likely to significantly alter water levels in the Upper Aquifer that is utilized for domestic and livestock uses on the Carrizo Plain. In addition, groundwater withdrawal from the Lower Aquifer is also not likely to affect the water quality in the Upper Aquifer.

Staff also considered the potential that increased infiltration of stormwater in the detention/infiltration areas was likely to increase groundwater recharge in the Upper Aquifer. In the Hydrology and Hydrogeology Report the applicant applied a SCS Curve Number approach to 13 years of daily rainfall data collected at the Simmler rain gage (#71) to estimate average runoff depths for the project site (CESF, 2008k). The average annual rainfall at Simmler was about 10.1 inches and the average annual runoff depth was about 2.5 inches (CESF, 2008k). Applying this ratio to the estimated average annual rainfall at CESF of 8 inches per year, yields an average annual runoff depth of about 2.0 inches. Therefore, at the 640-acre CESF site about 106 acre-feet would be expected to runoff the project site. Since all onsite runoff will be captured in the detention/infiltration areas this 106 acre-feet of runoff is additional water that will be allowed to either infiltrate or evaporate. Discounting evaporation of ponded water at Soda Lake, the applicant's groundwater modeling indicates that about 83% of annual rainfall is lost to evapo-transpiration. Thus, about 17 percent of the runoff captured in the detention/infiltration areas or about 17.6 afy could be expected to recharge the Upper Aquifer, which would offset about 85 percent of the projects anticipated groundwater pumping.

Finally, staff considered changes in evapo-transpiration rates at the CESF site. The proposed project includes covering up to 90 percent of the CESF site with mirrors and collectors. These mirrors will track the sun, shading much of the ground below. This shading can be expected to significantly reduce plant growth and evapo-transpiration.

Request 93; Carrizo Hydrology Report § 3.3.) Additional ownership information, pumping rates for these wells, and the date that each well was last used or how many months they run was not available to Carrizo, and was therefore not included.

E. Objections to Data Request 5

Data Request 5 refers to the Bechtel Report, which Mr. Ruskovich summarizes as saying "they have four Wells drilled on a 300 acre Project Site." Data Request 5 asks for specific information about these wells. Carrizo believes Mr. Ruskovich is referring to the four wells on the ARCO Solar site.

Data Request 5 asks for information not reasonably available to Carrizo.

As discussed above, the Commission's regulations allow any party to request from an applicant any information *reasonably available to the applicant* which is relevant to the notice or application proceedings or reasonably necessary to make any decision on the notice or application. (20 C.C.R. § 1716[b] [italics added].)

All available, non-confidential information for the ARCO solar site, including all available well information, is included in the Carrizo Hydrology Report. As indicated in the Carrizo Hydrology Report and the Bechtel Report provided in Appendix E, a total of four exploratory boreholes were drilled at the ARCO Solar site, and only one boring was completed as a well. (Carrizo Hydrology Report § 3.4.4.) It is not known how long ARCO Solar used its production well, but it is assumed that it was used as long as the facility operated, from sometime in the mid 1980s to the late 1990s, when the site was decommissioned. (*Id.*) Carrizo is not aware of any long-term pumping problems or issues with neighboring wells as a result of pumping. (*Id.*) Water quality information for the ARCO solar well is not available. As indicated in the Bechtel Report, the well was located in Section 27, approximately 157 feet north and 120 feet east of the southwest corner of the section. When the site was decommissioned, the well was most likely abandoned or destroyed, since Mr. Ruskovich has commented that there is no well at that location. (*See* Carrizo Hydrology Report, cover letter, at 6.)

Engineering Research
005.41

Carrizo Plain Groundwater Quality
Solar Thermal Project

September 23, 1982

MR. R. E. PRICE:

Here is a copy of the April 19, 1982, letter to Mr. H. M. Howe: Attention Mr. D. A. Deniston, describing Carrizo Plain water availability and quality. Also, included is a rewrite of a portion of the above letter which includes a table of ranges and averages for the important parameters listed in Table 1 of the April 19 letter.

Because well depths are variable or unknown and we have no well logs to accompany this data, I cannot recommend these values for a design basis. I will pursue obtaining the appropriate well logs as soon as the project is authorized and well owners can be contacted. This will provide additional information to interpret water quality data. However, in the event that the logs that can be obtained do not provide sufficient information to give us confidence in existing water quality data, installation of an onsite monitoring well will be necessary.

This well will be designed specifically for groundwater quality monitoring. It will intersect all water bearing strata down to bedrock. This could be up to 600 feet for this area. Separate water quality sampling of each water bearing aquifer as well as a composite of the entire water column will be possible.

A conservative cost per foot for such a well would be $30. This includes drilling operating costs, and direct and nondirect costs for two operators, and one geologist. It also assumes an average drilling rate of 40 feet per day. Any drilling logs we receive will provide additional information on expected drilling rates and, subsequently, estimated costs.

ORIGINAL SIGNED

D. P. GRIFFIN

DPG

DPG(551-305):bav

Attachment

cc w/attach.: TAJenckes

cc w/o attach.: KABeede
DADeniston
RCKarfiol
TMTurner

Bell Laboratory, patented a way of making electricity directly from sunlight using silicon-based solar cells. The next year, the Hoffman Electronics-Semiconductor Division announced the first commercial photo voltaic product that was 2.0-percent efficient, priced at $25 per cell, at 14 milliwatts each, or $1,785 per watt (in 1955 dollars). By the mid-1960s, efficiency levels were nearing 10 percent.

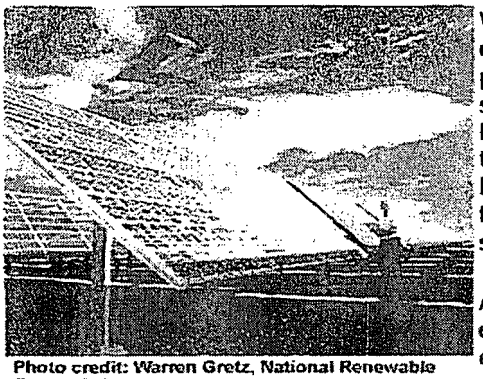

Photo credit: Warren Gretz, National Renewable Energy Laboratory

We call modern-day devices that convert sunlight into energy photovoltaic cells, or "PVs" for short. More commonly, they're known as solar cells. We can find them on calculators, hats, sidewalk lighting systems, and alongside freeways to power phones for stranded motorists.

As an outgrowth of the space exploration and following the energy crises of the 1970s, PV development increased. In 1979, ARCO Solar began construction of the world's largest PV manufacturing facility in Camarillo, California. ARCO Solar was the first company to produce more than 1 megawatt of PV modules in one year. Four years later, ARCO Solar dedicated a 6 megawatt PV facility in central California in the Carrissa Plain. The 120-acre unmanned facility supplied the Pacific Gas and Electric Company utility grid with enough power for about 2,500 homes.

When large collections of PV panels or modules are put together, they can be tied into the electricity grid system. These can supply additional power to areas that need electricity, but costs for new transmission lines and substations are prohibitive. These type of systems are basically Utility-Scale Applications of Photovoltaics.

PV systems can also be used in homes, whether they are connected to the electricity grid or are in rural or remote locations. More about that on our other page.

If you are interested in incentives for PV systems for your home or business, please visit the: Go Solar California! Website.

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How Solar Cells Work

Northern California Solar Energy Association

Sandia's Photovoltaic Systems Program

Solar Energy International

Solar Living Institute

U.S. Department of Energy - Solar Energies and Technologies Program Report
(PDF file, 5.2 MB)

1983
Only.

June 1984
Drilled well
Never used

Att H

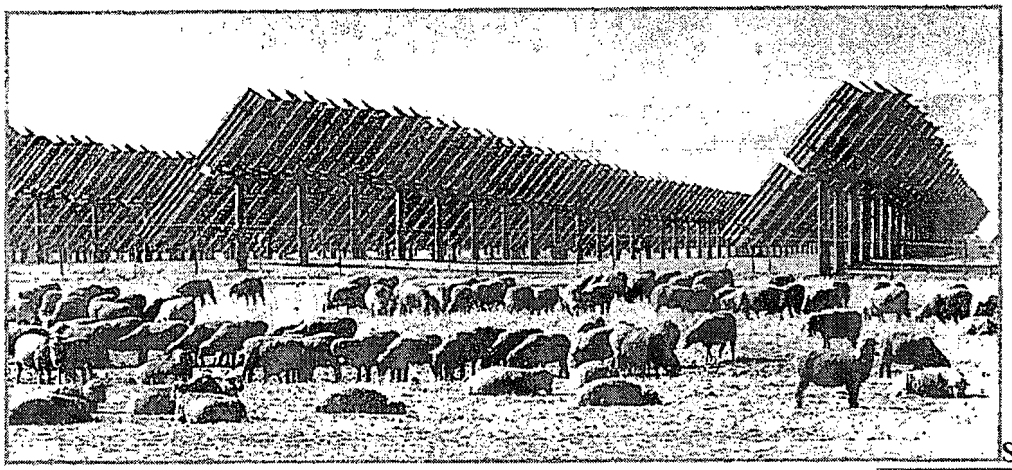
Photos from the Vault

- Home
- Where are the photographers now?
- © 2008 The Tribune

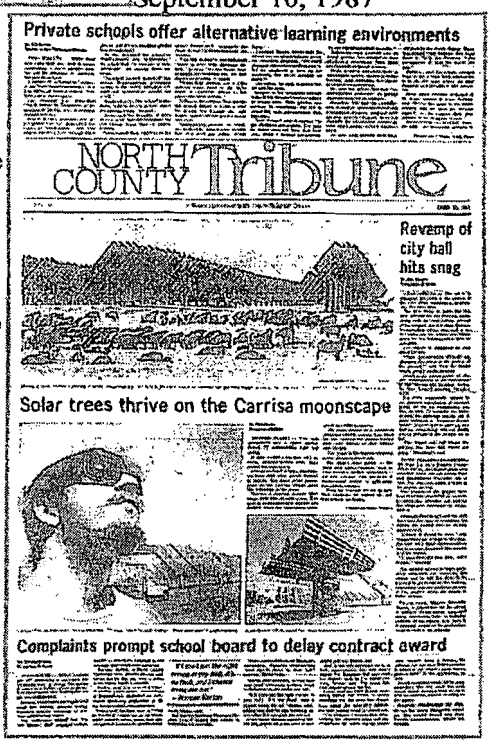
Search

Arco Photovoltaic Solar Power Plant

March 29, 2009 – 4:55 pm



September 10, 1987


Private schools offer alternative learning environments

NORTH COUNTY Tribune

Revamp of city hall hits snag

Solar trees thrive on the Carrisa moonscape

Complaints prompt school board to delay contract award

San Luis Obispo County used to be home of the world's largest solar-cell power station.

Built by an oil company in 1983, the view of the Arco solar power plant was an eerie combination of age-old scenes of sheep grazing and science fiction technology.

Every few minutes the silence of the Carrizo Plains would be broken with the whir of 799 solar arrays following the sun. The plant could generate 6.5 megawatts.

For comparison the Diablo Canyon Nuclear Power Plant generates 1,073 megawatts from Unit 1 and 1,087 MW from Unit 2.Four natural gas fired units at the aging Morro Bay Power Plant can generate up to 1002 megawatts but rarely do. The antiquated 1950's era technology is not cost effective.

The solar plant was a product of government incentives created in the wake of the 1973 oil crisis.

The sudden interest in energy independence had unintended benefits.

A major reason the Soviet Union could not keep pace with President Ronald Reagan's military build up was that the oil market collapsed as America cut oil consumption. No demand for Russian oil, the ruble falls, no budget.

When oil prices fell the U.S. lost interest in energy policy. Reagan removed solar panels from the roof of the White House and allowed tax credits to dry up for alternative energy.

Now Russia uses fuel as a foreign policy weapon.

Nations like Germany have taken the lead in solar development.

By April 1995 the last of the Carrizo solar panels were being scrapped. Now the wind whistles through a cyclone fence enclosing an empty field. Today after another oil price spike there are proposals for three new solar plants on the Carrizo north of the Monument. Photos by David Middlecamp

Saying so long to SOLAR GIANTS

APR 14 1995

Last of panels at solar plant goes

ShareThis

1. **7 Responses to "Arco Photovoltaic Solar Power Plant"**
2. Dave,

   Who operated the plant?

   By **Nick** on Mar 29, 2009
3. I have read that the newer photo-electric panels are 200 to 300 percent more efficient (produces 2 to 3 times more electricity per square footage) than those old style 1980's versions used as listed here. So, therefore, such a farm as wide and long as the previous one could generate a full 18 - 21 MW! And its all FREE!!! Sort of.

   By Steven Lester on Mar 30, 2009
4. Thanks for the comments Nick and Steve.
   Arco operated the plant for a number of years but they sold it when the tax credits dried up.
   Later solar plant owners tried to negotiate a higher rate before the Public Utilities Commission but PG&E argued that the rate payers did not want more expensive power. The plant could not pay for itself and was dismantled.
   Before someone launches a 'free market wins' comment keep in mind that the U.S. tax payers subsidize oil, gas, nuclear power and ethanol.
   PG&E had no qualms flipping the rate payer argument, and winning, when the utility negotiated to be paid higher rates for Diablo Canyon power than they paid for Carrizo Solar.
   Nuclear power has helped keep tons of green house gasses out of the atmosphere.Environmental costs need to be factored into our future power development choices.
   I'd be curious to know how many tons of carbon dioxide Morro Bay, Diablo Canyon or Arco Solar would have saved or produced over the last 10 years at full operation.

   By David Middlecamp on Mar 30, 2009
5. When the wind picked up on the Carrizo, as it usually did every day, the panel arrays would make all sorts of whistles and moans as the winds whirled among them.

   The arrays also collected many tons of tumble weed too. We were hunting rabbit nearby, when the arrays turned to the sun.....scared the poop out of us ☺

AH H

Subject: FW: Please forward to Greg
From: "Sandra Rowlett" <carrisa1@tcsn.net>
Date: Tue, April 14, 2009 7:50 pm
To: "'AGENA GARNETT'" <AGARNETT@ash.dmh.ca.gov>
Priority: Normal
Options: View Full Header | View Printable Version | View as plain text

Bingo!!! Looks like this may be what you need. I will let you email Greg directly with other needs or questions.
Sandy

From: Greg Beck [mailto:gregbeck@charter.net]
Sent: Tuesday, April 14, 2009 7:38 PM
To: Sandra Rowlett
Subject: Re: Please forward to Greg

Hi Sandy (and John).

Whereas I don't specifically remember actually seeing the well in the southwest corner of Sec. 27, I remember a few things I've heard. It was drilled for the daily use of the plant employees; for the purposes of restrooms and drinking water. For whatever reason, it was never used. I don't remember whether or not it was because there was insufficient water, or that it was of poor quality. For that reason, water was hauled to the Arco Solar Plant and pumped into a holding tank, first at the construction trailers at the north gate (middle of the fence line), then when the trailers were removed, the tank was set up next to the warehouse. This waste was used for the sole purpose of flushing the toilets; drinking water was bottled water from one of the major companies (like Crystal Springs, or Arrowhead).

As far as the four holes referred to in the Bechtel project, there were four holes drilled. One was in the corner across from Branch Mt. Rd. (I say corner because that gate was located on the section line in line with Branch Mt. Rd. and two fields on the "Beck Flats" cornered at that location. I don't know if the Lewis' have kept that well or not, but it was where Steve had a water tank set up. If I remember, it was drilled to 600 feet, taking it well past the "good" water. There were also three holes drilled in or near the centerline of the 320 acre field bounded by Hwy 58, (North) Soda Lake Road, and a line extending from Freeborn's house to the west to a line extending north from Branch Mountain Rd. I can't tell you if they are still there, or not, but I remember them being pretty close to the geographical center of the field, or maybe a little south. Those holes were supposedly drilled to monitor the "draw" when the main well was pumped, which it was at 400 gpm for 72 hours. I remember we built a long ditch parallel with the highway, towards the school to keep the water off the road. Took a few years of farming to "erase" the ditch.

They didn't release any of the information to us, even after they abandoned the well and project. Perhaps Jon knew something, because I seem to remember his investigating it one time.

That's pretty much what I remember. Feel free to ask more; maybe questions will jog my memory.

Greg

On Apr 13, 2009, at 8:41 AM, Sandra Rowlett wrote:

RH 5

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE *CARRIZO ENERGY SOLAR FARM*
BY CARRIZO ENERGY, LLC

DOCKET NO. 07-AFC-8

COMMITTEE ORDER DENYING PETITIONS OF INTERVENORS RUSKOVICH AND STROBRIDGE TO EXTEND THE DISCOVERY PERIOD

I. SUMMARY

On March 30, 2009, Intervenors John Ruskovich and Michael Strobridge (Petitioners) each filed a petition requesting unlimited extension of the 180-day discovery period set forth in Commission regulations. This Order **DENIES** both petitions.

II. BACKGROUND

On December 19, 2007, the Commission found the Carrizo Energy Solar Farm (CESF) Application for Certification (AFC) contained adequate data to allow beginning Commission review of the CESF project. That action began the 180-day period within which parties could exchange data requests and responses pursuant to California Code of Regulations, Title 20, section 1716(e). The end of the 180-day period was June 16, 2008.

Both Petitioners have taken an active role in the proceeding since the first public Committee hearing held on January 29, 2008. On January 27, 2009, more than one year after the review process began, John Ruskovich filed a Petition to Intervene in the case. On February 2, 2009, Michael Strobridge similarly filed a Petition to Intervene. The Committee granted both Petitions to Intervene in an Order dated February 13, 2009. That Order stated in part:

> *Petitioners may exercise the rights and shall fulfill the obligations of a party as set forth in section 1712 of the Commission's regulations. (Cal. Code Regs., tit. 20, § 1712.) The deadlines for conducting discovery and other matters shall not be extended by the granting of these Petitions. (emphasis added)*

Petitioner Strobridge subsequently served upon Carrizo Energy, LLC (Applicant) six different sets of data requests on February 6, March 4, 8, 16, 18, and 29, 2009. Intervenor Ruskovich filed data request sets on March 15 and 17, 2009. In each case, Applicant filed timely objections to the data requests, while also providing Intervenors Strobridge and Ruskovich with responses to many of the data requests.

On March 30, 2009, the two intervenors each filed a petition to reopen or extend discovery in the case (Petitions). The two Petitions were filed more than nine months after close of the 180-day discovery period defined in the Commission's regulations.

III. Discussion

Commission regulations grant to all parties (Applicant, Staff, and Intervenors) the right to obtain information. [Cal. Code Regs., tit. 20, §§ 1712 subd. (b), 1716, subd. (b).] However:

> *All requests for information shall be submitted no later than 180 days from the date the commission determines an application is complete, unless the committee allows requests for information at a later time for good cause shown. [Cal. Code Regs., tit. 20 § 1716(e).]*

Both Petitioners participated extensively in this proceeding from the outset. However, they both elected to delay filing their Petitions to Intervene until approximately 13 months after the AFC was deemed "data adequate" by the Commission. Petitioners served their first Data Requests on Applicant at least eight months after the 180 days allowed by Section 1716(e). After Applicant filed timely objections, the Intervenors filed their Petitions seeking to reopen discovery. We find that the Intervenor's Petitions are untimely.

In addition, both Petitions fail to demonstrate good cause.

1. The Petition of Michael Strobridge asserts:

   (a) This is not a typical one-year siting process because the Carrizo Energy Solar Farm (CESF) Application for Certification (AFC) is a new type of project;

   (b) The CESF AFC has generated a tremendous amount of data and multiple reports;

   (c) California Code of Regulations, Title. 20, section 1723.5 gives any party or person the right to propose modifications in a project;

   (d) On March 29, 2009, Petitioner Strobridge sent a letter to Project Manager John Kessler stating concerns about potential noise at his family's residence near the proposed CESF site and proposed that

the Applicant move the power block; and

(5) Petitioner Strobridge does not believe he can properly represent his family or his community if his late-filed data requests are "silenced".

2. The Petition of John Ruskovich asserts:

(a) Revised reports and changes in water use estimates justify further data requests;

(b) This project is the first of its kind and will set precedent;

(c) Several workshops concerning some draft sections of the Final Staff Assessment (FSA) are still planned;

(d) Data will constantly be created in all phases of this project up to and including decommissioning; and

(e) It is Petitioner's right to submit data requests and he is being denied the right to do so.

As parties seeking to extend discovery in this case far beyond the normal time limits, Petitioners bear the burden of proof of establishing good cause for their Petitions. Mr. Strobridge's assertion that the CESF is not typical and involves a large amount of data is not persuasive. Certainly large solar projects present numerous challenges involving extensive quantities of data, however, this fact has been clear to all participants from the outset of the case and is not changed by Petitioners' decisions to delay formal intervention and the submittal of data requests. To be sure, California Code of Regulations, Title. 20, section 1723.5 gives any participant the opportunity to propose project modifications, however, the burden of proof is on the proponent of the modifications to demonstrate the reasonableness of the changes. Mr. Strobridge's Petition does not demonstrate that further discovery is needed to support his proposals to change the project.

Mr. Ruskovich asserts he has a right to request data, "as long as there are any revision [sic] to the project." He goes on to assert that the formal discovery process must be allowed to continue throughout the duration of the project. He is mistaken. As noted above, the Commission's regulations provide 180-day window for discovery, after which parties must request additional time and provide a showing of good cause. The discovery process in a siting case at the Commission is specifically not open-ended. It must have a finite end as the process moves toward resolution. In pursuing a thorough gathering of evidence and a deliberative resolution of issues, the Committee must also strive to move the siting process forward in a timely way. If granted, Petitioners' requests for additional and even open-ended discovery would likely prolong the schedule in this case.

In addition, there are reasons of state policy which compel us to expedite this process as much as possible. Carrizo Energy Solar Farm is a renewable energy project and is thus entitled to priority review pursuant to Governor Schwarzenegger's Executive Order S-14-08, which establishes a 33 percent Renewables Portfolio Standard by 2020. It also directs the Commission to work collaboratively with agencies to *expedite* renewable energy permitting. The Committee is therefore reluctant to accommodate any request by a party that would cause delay to the proceeding, particularly where we find no good cause for the request.

IV. CONCLUSION

Since the outset of this proceeding, Petitioners have had the opportunity and have participated in numerous public information exchanges regarding this project. Our denial of their extremely late and untimely request to extend what has already been a very long and involved discovery period does not constitute a denial of Petitioners' due process rights. Furthermore, in our view, Petitioners have not provided good cause for reopening discovery. Finally, the clear public policy favoring the efficient review of renewable generation projects, such as the CESF, guides us to disfavor requests that are likely to further delay the siting schedule.

V. ORDER

The Petitions of Intervenors Ruskovich and Strobridge are **DENIED.**

Dated: May 11, 2009 at Sacramento, California.

JEFFREY D. BYRON
Commissioner and Presiding Member
Carrizo AFC Committee

JULIA LEVIN
Commissioner and Associate Member
Carrizo AFC Committee

April 12 2008 ATT 5
Mr. Nick Bartsch Comments
South Magnolia
Workshop

it participating as an interested party, providing verbal comments, written comments all along the way in this at least one-year process.

You can also, if you do decide that you want to be more active or a more integral part of this process, you can consider to become an intervenor.

Now, the difference between the two is kind of -- as an intervenor you will be able to not only participate as an interested party, but more, you can provide testimony and you can also provide witnesses during the public processes, especially during a very important hearing, which is called an evidentiary hearing, which is down the road a little bit.

And during that evidentiary hearing you can provide your own witnesses; you can cross-examine other parties' witnesses; and your testimony and the testimony of your witnesses would become a basis for a decision that the Commission is going to make at the end of the process.

Now, when is a good time to intervene or participate? You should be participating, if you're interested, from the beginning. Or as soon

John Ruskovich
13084 Soda Lake Road
Santa Margarita, CA 93453
agarnett@tcsn.net

STATE OF CALIFORNIA
State Energy Commission
And Development Commission

DECLARATION OF SERVICE

I, John Ruskovich, declare that on May 28, 2009, I served and filed copies of the attached Letter to the San Luis Obispo County Board of Supervisors. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/carrizo/index.html]. The document has been sent to all parties in this proceeding (as shown on the Proof of Service list) and to the commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

__X__ sent electronically to all email addresses on the Proof of Service list;

_____ by personal delivery or by depositing in the United States mail at Atascadero, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred."

AND

For filing with the Energy Commission:

__X__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

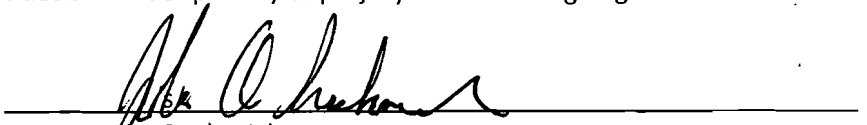
OR

_____ depositing in the mail an original and 12 copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-8
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.



John Ruskovich

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE *CARRIZO ENERGY SOLAR FARM PROJECT*

Docket No. 07-AFC-8

PROOF OF SERVICE
(Revised 5/11/2009)

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