Hingtgen, Robert J

From:	Howard Cook <howwcook@yahoo.com>
Sent:	Monday, January 12, 2015 5:26 PM
To:	Gungle, Ashley; Fogg, Mindy; Hingtgen, Robert J; Bennett, Jim; Real, Sami; Wardlaw, Mark
Cc:	Donna Tisdale; Ken Daubach; Mark Ostrander; Howard Cook; Danielle Thomas; Cherry Diefenbach; Jacob, Dianne; Wilson, Adam; Richard Alcorn; Helen Landman; Ben Schultz; Billie Jo Jannen; Dave Landman; East County Magazine; Jim Pelley
Subject:	Howard Cook comments on Soitec Final EIR and requested by SD County PDS
Attachments:	01-08-15 SOITEC FINAL EIR WATER COMMENTS .doc

RE: Soitec Solar Development Program Impact Report, Log No. PDS2012-3910-120005 ER; 3800-12-d, GPA, Tierra Del Sol,3300-12-010 MUP, 3600-12-005 REZ, 3921-77046-01, AP, Rugged Solar, 3300-12-00 MUP, SCH No. 201212108

Attached are my comments to the Soitec Final EIR. Most of these were also covered at the Boulevard Planning Group meeting of 01/08/2012. You asked asked at that meeting that I document these for your own, the Soitec Record and County PDS use. You also requested that I send them to you via E-Mail as soon as possible.

Regards,
Howard W. Cook, retired Chair Jacumba Sponsor Group

COMMENTS AND DEFECIENCES ON SOITEC FINAL EIR WATER ESTIMATES, WILDLIFE AS WELL AS GENERAL EIR TOPICS
RE: SOITEC FINAL EIR, LOG NO. PDS2012-3910-120005 ER

These comments on construction and operational water use described in the Soitec Final EIR is prepared by Howard W Cook of 1243 Jacumba Street Jacumba Hot Springs, CA 91934. He can be contacted at 619-766-4640, howwcook@yahoo.com.

County PDS personnel at the 01/08/15 Boulevard Planning Group meeting on Soitec told us of last minute changes to the Soitec projects. Because of the Planning Commission and The San Diego BOS imminent meetings, there is not time to analyze the changes and reflect them in this report that was already presented at the 01/08//15 meeting. Our preliminary review of the Soitec Project changes is that they do not change the substance or the conclusions of the presented report herein and at the Boulevard Planning meeting. **These last minute changes just illustrate a flawed EIR that should be restarted with more complete data and analysis. We further believe that County Council should review the changes and missing data in the EIR to see if the law and other requirements of CEQA are met.**

We also learned at the 01/08/14 Boulevard Planning meeting of a major new addition to the Soitec projects. We learned of the addition of Lithium Ion battery arrays to the Soitec Projects. We were told that somewhat over 150 of these battery modules would be used by the Soitec projects. Each 150-battery module would be the size of a large metal ocean-shipping container. First of all this was not documented in the Soitec Draft EIR. Yet again, another situation requiring the County to restart the EIR process. Another reason is that this major change requires non-documented water and concrete requirements. Lithium Ion batteries also exponentially increase the risk of fire. Cequa requires that these environmental additions and their issues be documented.

Ground water is very marginal on the East side of the Tecate Divide. Ground water is the only source of water available in Far Eastern San Diego County. There are no California water projects, no access to Imperial County's Colorado River water, no meaningful reservoirs. Therefore The developers and San Diego County are putting the lives, livelihoods and homes of Eastern San Diego County residents aswell as its largely tourist oriented businesses in jeopardy. It must follow, that Soitec water estimates should be detailed and precise to avoid overuse and collapse of our aquifers. The Final EIR describes the Fractured Water nature of the East County aquifers as fragile and not well known. Unfortunately, many of the water estimates and/or backup detail as shown in the Final EIR and are either inaccurate, significantly missing in detail backup data and many are just plain missing. This situation puts the water resources in the project and nearby areas at risk. The citizens at the Boulevard Planning meeting of 01/08/2015 were told that they have no recourse or monetary award if actual experience shows actual water use is in excess of the EIR estimates. The County should not put thousands of its East County

citizens in this situation and therefore must restart the entire EIR process **or turn down all four of the Soitec projects**.

The County (Jim Bennett of PDS) acknowledged that the author's previous report about the last February's Draft EIR exposed major deficiencies in Soitec water estimates. This report on the "Final Soitec EIR" defines a continuing problem with water estimates. The problem with the in error construction water estimates as well as a wildlife impact is that it was so "significant" that the County should have restarted the EIR process. The Planning Commissioners and the BOS today have another opportunity to restart the entire EIR process. Cathy Fuller of the "Protect Our Communities Foundation" at the 01/08/15 Boulevard Planning meeting said that the discrepancies in the Draft and Final EIR require the county under CEQA laws, to restart the entire EIR process. I agree and especially since Soitec appears, according to current news reports, to be unable to financially and otherwise complete the project with their EIR specified CPV equipment.

The following comparative analysis of the Final EIR construction water estimates and in the two local similar projects contains rounded estimate figures.

A. **COMPARITIVE ANALYSIS SIMILAR PROJECTS (SOITEC AS PROPOSED IN FINAL EIR**

- TOTAL PROJECT – 1500 acres, 168 MW, construction water-59064 M gal, Op-?
- TDS - 420 acres, 60 MW, construction water -21,920 M gal
- Rugged – 765 acres, 80 MW, construction water-27402 M gal
- Lan West &East – 285 acres, 28 MW, construction water -10,104 M Gal

B. **COMPARITIVE WATER ESTIMATE ANALYSIS AGAINST TWO OTHER LOCAL PROJECTS**

- **ECO SUBSTATION ACTUAL WATER USE EXPERIENCE (SDG&E'S PROJECT, INTEGRAL TO SOITEC PROJECTS CONSTRUCTION AND OPERATION)**

The first project comparison is the ECO project. This project is about complete and has similar construction components. The project consists of two substations both covering about 100 acres and includes a gen tie line connecting the two substations. It is almost complete and has used (will use) about 93 million gallons of water. Compare this figure with the 1500 acre Soitec project and which includes several gen tie lines although shorter. ECO did not make its own concrete utilizing out of the area water. The total Soitec Final EIR estimates construction water use is shown to be only 168 million gallons of water and that includes its own concrete production and rock crushing facility. Assuming similar construction components the total

construction water estimate should approximate 1350 million gallons of construction water. Because of shorter Gen tie lines, the total construction water estimate should still be in excess of 1,000 million (one billion) gallons of water. . It is also constructive to note that the original ECO project construction water estimate was 30 million gallons of construction water, or over a 3 time actual use increase over the original construction water estimates Since ECO provided outside concrete and Soitec describes in house concrete production with local ground water, there is reason for an even larger increase of use over estimate. The same consultant ultimately responsible for the construction water estimates on ECO is Dudek, who also have the same function on the Soitec projects, in fact they were responsible for the errors we pointed out in our draft EIR report and which it is acknowledged by the County Hydrologist to contain gross errors and omissions. We believe that the water estimates by the consultants on both projects (ECO and Soitec) were kept low to facilitate approval by the County and other entities. In Soitec's case they are trying to make water estimates "less than significant" per CEQA standards. Water supplies from local water supplies (Jacumba, Pine Valley and western San Diego County sources especially all in a drought cannot meet the **actual expected water needs, without draining East County aquifers and ruining the human and wildlife environment.**

On 10-02-13, an official SDG&E "Project Refinement Request form" was prepared to document the increase in ECO Construction Water estimate from 30 million gallons to 90 million gallons. We are providing excerpts from this revealing document to illustrate the gross errors made by Dudek , the County and SDG&E as follows:

"The conditions at the ECO Substation site which is currently under construction have differed from what was originally anticipated, resulting in a higher project demand for construction water"

"The contractor estimated that soil removal and compaction was originally expected to reach 10 feet. However remedial removal and recompactation of alluvium in excess of 20 feet in depth across most of the site was necessary" (The Soitec Final EIR on page 13 of the project summary says that foundations for the Soitec trackers could be expected to reach 20 feet).

Now we ask the readers, should we not expect the total construction water use to be more like the actual ECO water use than the contrived Dudek estimates. To review this picture again, 100 acres of construction of ECO and its Gen-tie line project took 93 million gallons, therefore 1500 acres of construction at Soitec should be expected to exceed 15 times as much, **over 1000 million gallons**).

- **2ND COMPARISON, THE PLANNED 100 ACRE JACUMBA SOLAR FARM ADJACENT TO ECO**

The second local project comparative is Jacumba Solar by Nextera. The Jacumba Solar Project is still in the permitting stage. The project covers about 100 acres and has a short gen tie line to the Eco Substation. It uses convential silicon solar. The farm is projected to produce 20 Mega watts annually. Jacumba Solar construction water use is officially planned to be 20 million gallons. The Soitec Construction Water estimate difference from the selected two comparative projects is so large as to indicated gross errors. Using the 100-acre Jacumba Solar water use estimate as the model, a better estimate for Soitec Construction water would be 15 times more or 300 million gallons, with more to be, as the Soitec estimate must include concrete use and production. Nextera, the company, has multiple solar projects completed and underway throughout the country. Nextera is one of the largest Energy Companies in the country. They have much more actual experience than Soitec, which only has one small 2O acre CPV installation at Newbury Springs which is also built on flat land. The Soitec Construction Water estimate difference from the selected two comparative projects is so large as to indicated gross errors.

Why the huge difference in actual construction water use with ECO and construction water estimated use in the Jacumba Solar project? I believe this is because of the incomplete and not detailed backup work breakdown structure of the estimating process. The missing and impaired construction estimates shown below are also major. I also believe it is because Soitec and their consultants want to present a construction estimate in the EIR as "Not Significant" in CEQUA terms and therefore requiring a much more detailed hydrology study and also it would probably kill the project.

C. MISSING/IMPAIRED SOITEC CONSTRUCTION WATER ELEMENTS AND OTHER DESCREPENCIES

These major construction elements described in the draft and final EIR
are missing in the water estimate section of the "Final EIR" Many of these construction water estimates were also missing in the authors report about the Draft EIR. These dual missing or impaired elements will be pointed out.

- **Six to seven mile TDS to Boulevard substation gen-tie line** The construction water estimate for the 6 to 7 mile TDS Tie line is missing. This construction element proved to be a major water user at the ECO project. **Also missing in the Draft EIR**

- **Three to four mile Rugged and Tule Wind TIE-Line to Boulevard substation** The construction water element for the joint Soitec/Tule 3 to four mile Gen tie line is missing. Whether it is in the Tule or the Soitec water estimate is not material. **. Also missing in the Draft EIR**

- **Fencing, drainage and culvert construction**, These estimates are missing. The Boulevard Eco substation to which the Soitec projects are planned to be connected has a 3 to 4 foot cement apron around the entire perimeter. This keeps out surface water and provides a secure protective base for fencing. A huge amount of cement and water is required for Soitecs 1500 acres. The same Boulevard ECO substation has multiple concrete lined drainage ditches, once again a huge amount of concrete is used and also ground preparation is water intensive. The substation like the Soitec projects is carved out of steep terrain and is also subject to drenching thunderstorms, therefore the need for extensive concrete culvert and perimeter fencing apron protection. **Also missing in the Draft EIR.**

- **Road, Road Bujiding, and project surface construction water estimates –** These water estimates are missing. The Final EIR addresses the material planned but does not provide any construction water estimate. We also understand that the specified binding agents to be used with the DG material specified in the EIR only has a life span of 12 to 18 months. This is just another example of a hasty and flawed EIR. It is instructive that the Boulevard ECO substation uses asphalt, with concrete used in vulnerable areas such as culverts and foundations. **Also missing in the Draft EIR**

- **Electrical Equipment and building foundations other than Trackers -** Electrical Equipment foundations **other** than Trackers such as transformers, invertors, electrical pole, building foundations, are missing from the Final EIR construction water estimate. The numbers of these items in our opinion are in the tens of thousands for the Soitec projects. A detailed engineering analysis would define the heavy water intensive soil preparation and concrete needs, we see no evidence of such a document in the EIR. Our prior Draft EIR experience and an investigation by the County hydrologist revealed a very sketchy and inaccurate engineering analysis of construction needs and processes. **Also missing in the Draft EIR.**

- **Concrete water estimates -** The construction water estimate for the 10-acre concrete production plant is based on 20 percent water content of the concrete. This ignores the amount of water associated with the production and transportation of the concrete. this is a time sensitive process that must be done after each production batch, transportation event and after production each day. This could usually be three to five times the water used in actual content of the concrete. No back up figures are provided for the amount of concrete needed for each project. Unfortunately, many of the water estimates and/or backup detail as shown in the Final EIR, are either inaccurate, significantly missing in detail backup data and many are just plain missing. This is also complicated because the Final EIR waffles and does not finalize the need for a concrete foundation for each of the 8,000 CPV

trackers. We believe it is necessary because of the severe winds and flash flooding experienced at each project. TDS experienced a six-inch over a 2-hour rain event this August 2014. The 10-acre batch plant asks for permits for up to ten - 12,000 gallon storage tanks on site probably in anticipation of the heavy daily and after each use washing requirements for trucks and concrete production equipment. The data in the EIR is clearly inaccurate and grossly underestimates water related concrete water use. The provided 900,000 million gallons concrete water requirements and estimates are clearly short.

- **Impaired engineering design for CPV Tracker foundations** – As shown above, the Final EIR waffles and does not finalize the need for a concrete foundation for each of the 8,000 CVP trackers. We believe that concrete constructioni is necessary because of the very steep terrain, severe winds, and flash flooding experienced at each project. As reported, TDS experienced a six-inch rain event over a 2-hour period this past August 2014. We believe that the underlying water and concrete construction estimates are missing from the EIR. All evidence indicates that this is the case. Concrete foundations going down to 20 feet in the ground, per the Final EIR description in the project summary, would require another huge amount of water.

- **Battery storage system addition to Soitec Projects -** We were told on 01/08/15 about the addition of Lithium Ion battery arrays to the Soitec Projects. We were told that somewhat over 150 of these battery modules would be used in the Soitec projects. Each 150-battery module would be the size of a large metal ocean-shipping container. This, as previously described was not documented in the Soitec Draft EIR. This major change requires large non-documented water and concrete requirements. Each module will probably require a concrete foundation and possibly another complete building. Lithium Ion batteries also exponentially increase the risk of fire. Cequa requires that these environmental additions and their issues be documented. **Also missing from the Draft EIR.**

It is completely possible that some more items are missing from the Final EIR. Because of the short amount of time given to review the Final EIR and a lack of data as well as basic engineering design documentation in the EIR, which is what drives competent more accurate construction water estimates. This lack of data is what drove the over three hundred percent actual water usage experienced in the construction of the ECO substation and gen-tie line.

The East County will wither up for lack of water faced with Soitec projects covering fifteen times the size of the Eco substations. We also, in the comments to the Soitec Draft EIR covered the additional Water draws of other Energy projects in the same time frames. These are projects like Tule Wind (20 million gallons), Rough Acres Ranch, Jacumba Solar, and several more. There is little reference to them

in the Final EIR. It is instructive to note that local water sources (Jacumba, Live Oak Springs) were unable to meet the new ECO project water demands. Eco was then forced to buy water from the City of San Diego and transport the water with many trips, incurring large carbon footprints, all the way out to Jacumba.

D. WILDLIFE CONCERNS

The wildlife issues were covered extensively in the Draft EIR. In particular regarding the **Endangered** Penninsular Bighorn Sheep and its documenter corridors at the Rugged site. Also the Golden Eagle is prime habitat at both Rugged and TDS. All of this was verified by the following in the Draft EIR Record:

- Letter from the Anza Borrego Foundation
- Letter from Mark Jorgenson , retired former Supt. Anza Borrego State Park and a consultant and published author on the Penninsular Bighorn Sheep.
- Letter from The Nature Conservency.
- Letter from CA Fish and Wildlife Service
- Howard Cook letter on Wildlife
- San Diego Zoo Global published article on their Bighorn Sheep Corridor study, which is currently underway and the vital need for the corridors in the Boulevard and Jacumba areas.
- Picture provided of a Mountain Sheep adjacent in McCain Valley shown in the East County Magazine in January 2013. Since then, we have provided the Jacumba Solar permit process records with multiple 2014 Jacumba area photos of both Bighorn Sheep and Golden Eagles.

In addition, all of these letters pointed out the reliance of the Penninsular Mountain Sheep on water coming from seeps and water flow in Walker, Carrizo and Tule Creeks and the adverse effect of Soitec water draws on that water. Furthermore The Colorado Basin Water Authority classifies Carrizo Creek with a wildlife "Rare" classification in its creeks and watercourse grading system for the same reason.

We also pointed out in our Comments on the Draft EIR, the adverse effect the Soitec Water draws will have on Carrizo Creek downstream water flow on San Sebastion and Harper BLM Wilderness marshes located in and adjacent to the Borrego Valley. These marshes are part of the Pacific flyway and home to the endangered Borrego Pupfish. This was not addressed at all in the Final EIR.

By Howard W Cook, retired Chair Jacumba Hot Springs Sponsor Group