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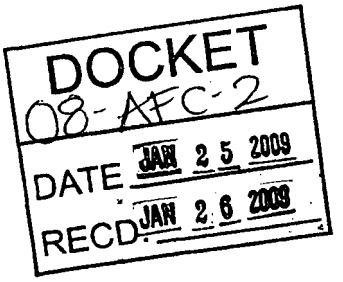

January 25, 2009

BY HAND DELIVERY

Eric Solorio, Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Beacon Energy Solar Project, AFC No. 08-AFC-2

Dear Mr. Solario:

Attached are the 10 hard copies and 10 CDs of Beacon's supplemental responses to the Energy Commission Data Requests as e-mailed to NextEra Energy on January 12, 2009. This has also been docketed in the docket office with hard copies to all on the proof of service list, but for NextEra employees and consultants who have all agreed to be served electronically.

If you have any questions please don't hesitate to contact me.

Very truly yours,

DOWNEY BRAND LLP

Jane E. Luckhardt

:ln

cc: Service List

Attachments

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AECOM

Letter of Transmittal

ATTENTION: Eric Solorio
Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, California 95814

DATE: January 21, 2009

PROJECT REFERENCE: Beacon Solar Energy Project (BSEP)

PROJECT NUMBER: 10056-014-300

WE ARE SENDING YOU THE FOLLOWING:

:

Number of originals	Number of copies:	Description:
2		Response to California Energy Commission Data Requests as emailed to NextEra Energy, January 12, 2009

REMARKS

At the request of BSEP and NextEra Energy, attached is the response to the water resource data requests as provided in the email to Kenny Stein of NextEra Energy on January 12, 2009. Should you have any questions on the water resources response, please call me at your earliest convenience.

Michael E. Flack, PG, CEG

ISC Chemical Services Division Manager
AECOM Environment

Cc: Scott Busa NextEra Energy, w/ attachment
Meg Russell, NextEra Energy, w/attachment
Kenny Stein, NextEra Energy, w/ attachment
Jane Luckhardt, Downey Brand LLP,2 copies w/attachment
Jared Foster, Worley Parsons w/attachment
Sara Head, AECOM, w/attachment

BEACON SOLAR ENERGY PROJECT (08-AFC-02)
CEC STAFF DATA REQUEST
Email Request January 12, 2009

Technical Area: Water Resources **Supplemental Response Date: January 16, 2009**

The following are supplemental responses prepared to address the CEC comments that were provided in an email from Eric Solorio, Project Manager for the California Energy Commission (CEC) to Kenny Stein of NextEra Energy (formerly FPL Energy, LLC), representing the Beacon Solar Energy Project (BSEP), on January 12, 2009. These responses provide additional information to the data request responses provided on July 16, October 13, October 23, and December 8, 2008.

January 12, 2009 Supplemental Data Request:

> We requested from Beacon an evaluation of the TDS concentrations in groundwater in the site vicinity and specifically to delineate the 1000 part per million (ppm) isoconcentration line. Beacon responded by providing a map (96W1) that indicates their interpretation of the 2008 1000 ppm TDS line. On that map are several time series plots of TDS concentrations none of which extend to 2008. In fact, most don't show concentrations past 1990. There is no data provided that supports the delineation of the 2008 1000 ppm TDS isoconcentration. In fact looking at well 30S/38E-32D03, 11 data points collected from this well between 1981 and 2003 had TDS concentration in excess of 1000 ppm. 30S/38E-32D03 is located approximately 1.6 miles closer to the project site than the 1000 ppm TDS line presented on Figure 96W1.

Supplemental Response:

The CEC has been aware of the limited geochemical data available for the Koehn Sub-basin as discussed in AFC (Section 5.17.2.7, “Groundwater Geochemistry”), July 16 (response No. 58), October 13 (response No. 96) and December 8, 2008 (response 96W) as well as Workshop discussions (e.g., the November 6, 2008 Workshop). What was submitted in response to the December 8, 2008 email data request was prepared consistent with discussions provided during the November Workshop. To address the CEC request, Figure 96W1 has been revised (see attached Figure 96W1A) to show the interpretation in the trend of the data predicting concentrations for 2008 and to provide water level data as available for each well. The revision to the map and additional analyses using water level data did not change the interpretation of the 1,000 ppm iso-concentration line for total dissolved solids in the Koehn Sub-basin.

The trend lines were developed to predict TDS concentrations for 2008 from wells with the most available data beyond 1976. It is clear from most of these data sets that while the data sets are limited beyond 1990, the TDS concentrations have been stable during periods of significant pumping. As the CEC is aware, there is significant geochemical data for the years between 1958 and 1976. These data were discussed in response No. 96 (October 13, 2008) and show that there was not significant variation in the TDS data, even though there was pumping in support of agriculture during those years (see Figures DR-96a and DR-96b). In fact, the area of poor quality

water (>1,000 TDS) southwest of Koehn Lake shown from data between 1953 and 1958 (Figure DR-96a), appears to be dissipating in 1976 (Figure DR-96b) during the onset of an intense period of agricultural pumping. These data would suggest that TDS concentrations were not significantly influenced by historic agricultural pumping. This stability can be seen by comparison for wells where water level data were collected consistent with TDS data. The changes in water level data do not correlate to changes in TDS data, supporting that pumping the area of these wells did not influence aquifer geochemistry. Additionally, for well 30S/38E-30P01, the water levels did not change at all, yet there were wide swings in TDS concentrations.

Since significant pumping ended in the Koehn Sub-basin around 1986, using trends in data gathered through 1990 to predict concentrations in 2008 appears to be reasonable. This is further supported by the fact that groundwater pumping has been significantly curtailed in the Koehn Sub-basin since 1990, and is only a small fraction of the volume of water pumped during the period of agricultural development. Where data are limited or erratic showing wide swings in concentrations (see Wells 30S/38E-30P01, 30S/38E-32D03 and 31S/37E-05M01) and where a concentration trend is not clear, trend analysis was not done and the most recent concentration was interpreted as this would reflect the current geochemical equilibrium.

Well 30S/38E-32D03 does show a wide range of TDS concentrations. The most recent trend in data shows a decline in TDS concentrations since August 1993. The erratic concentrations in this well may be due to a number of factors, including sample collection techniques, laboratory analysis, aquifer heterogeneity and changes in local groundwater pumping. Sample collection could influence the results if the water sample is collected with high turbidity and not filtered either in the field or by the lab. This well is located in an area of poor water quality that appears to be dissipating since 1976 as described above. Given that the aquifer in the Koehn Sub-basin is composed of layered alluvial strata, it may be that there are limited volumes of poor water quality isolated within some of these strata. The withdraw of this water could be affected by changes in local pumping dynamics as water is differentially withdrawn from this zone due to competing pumping (i.e., well interference). In any case, the area around well 30S/38E-30P01 appears to contain water of good quality, and it would be anticipated that long term pumping associated with the project would influence this water as well, such that the cumulative concentration would be below 1,000 ppm. The sustainability of poor quality water from this area would certainly be in question for a water supply of 30 years.

January 12, 2009 Supplemental Data Request:

> Further, some of the time series plots show TDS concentrations varying significantly. There is no interpretation of why the TDS concentration varied through time. Comparing TDS concentrations to measured water levels can help with that interpretation. However, of the 20 hydrographs presented on Figures 115W(a) and 116W, only one well

(29S39E001M) showed both the TDS time series plot and the hydrograph. And that well had only 4 TDS data points that were obtained between 1976 and 1984.

Supplemental Response:

It is very important to note that in many cases wells with the most historic geochemical data were not the wells with the most water level data. In response to this request Figure 96W1A as been revised showing water level data for each of the wells. As noted above, there is poor correlation between water levels and TDS concentrations over time for these wells. Lastly, as noted above, pumping within the Koehn Sub-basin, and the attendant changes in water levels, does not appear to have influenced TDS concentrations.

January 12, 2009 Supplemental Data Request:

In order to compare TDS values to water levels, the time series TDS plots need to be overlaid on the hydrographs. The time scale on the hydrographs is presented in days, and the time scale on the TDS time series plots is presented in years. The time scales of these figures need to be the same.

Supplemental Response:

See the response to the above comment and Figure 96W1A which has been revised to add water level data for each of the wells used to interpret the groundwater quality in the Koehn Sub-basin. The graphs have been provided using uniform time scales.

January 12, 2009 Supplemental Data Request:

To assist with the determination of groundwater yield in this area, Beacon should obtain information on the existing wells.

Supplemental Response:

Data on available well yield were provided in the AFC (see Section 5.17.2.8, “Groundwater use within the Koehn Sub-basin”) and provided in Appendix Table J-1A. These data were derived from available information in Department of Water Resources (DWR) and United States Geological Survey (USGS) databases’ and from information provided by Honda and most recently, Rancho Seco (Well H01). Additionally, a field survey of wells locations from publicly accessible points was conducted with the purpose of determining the present condition of the well, its approximate location and status. For the AFC, BSEP contractor field staff inquired where possible of well owners to established information on well yield. In most all cases, information was not provided or access to the property was not allowed. The information that is provided in

Table J-1A reflects the extent of information that could be determined from database review and from reasonable inquiry through a field investigation.

It is important to note that the available well yield information was also presented and discussed in the groundwater model.

January 12, 2009 Supplemental Data Request:

> In addition, it appears that an ag well located northeast of Koehn Lake (29S/39E-32E01) supplies a sufficient volume of water for alfalfa production that has TDS concentrations in excess of 1000 ppm. That area could also be a viable well field for supplying degraded water to the project.

Supplemental Response:

It is important to realize that this one well in an area northeast of Koehn Lake does not translate to providing sufficient information to support a sustainable 30-year water supply for the project. Significant further investigation would be required without the guarantee of success that there would be sustainable poor quality resource over the term of the project. There is an inherent assumption in the data request above that would require a demonstration of the viability of supply in this area, i.e., that there would be sufficient sustainability of resource and that there would not be significant impacts to groundwater storage or influence to adjacent users. Groundwater well yields vary in this area from 350 gallons per minute to 1,160 gpm (see Appendix J-1A, Wells 29S/39E-26A01, 29N01, 29M01, 32C01 and 33H01). Peak water requirements for the project are 4,000 gpm, as such multiple well completions would be required to support project water requirements for the late spring, summer and early fall months. This area is the terminus of the Koehn Sub-basin and is constrained between bedrock and Koehn Lake, suggesting that there may be storage limitations. Recharge does not appear to be as extensive in this area, by comparison to what was has been documented in the area of the project site as such there may be issues with regard to changes in storage, and subsequently changes in water levels.

The well location identified in the comment is about 16 miles from the Beacon Project site. Table J-1A (Appendix J of the AFC), shows that this well is a 6-inches in diameter and that it has been drilled to a depth of 125 feet below the ground surface. The available data did not reveal information on the well yield for this well, though it would be anticipated to be in the lower range of the yields mentioned above. Further, the field survey from publicly accessible points did not locate this well, suggesting it is no longer in use and possibly destroyed. The shallow depth of this well may be the reason there have been water samples collected above 1,000 ppm TDS, as it is apparently completed in a shallow aquifer that may have been influenced by historic agriculture in the area.

The rationale for excluding this area as a possible water supply for the project, follow many of the reasons that have been provided previously in prior data request response.

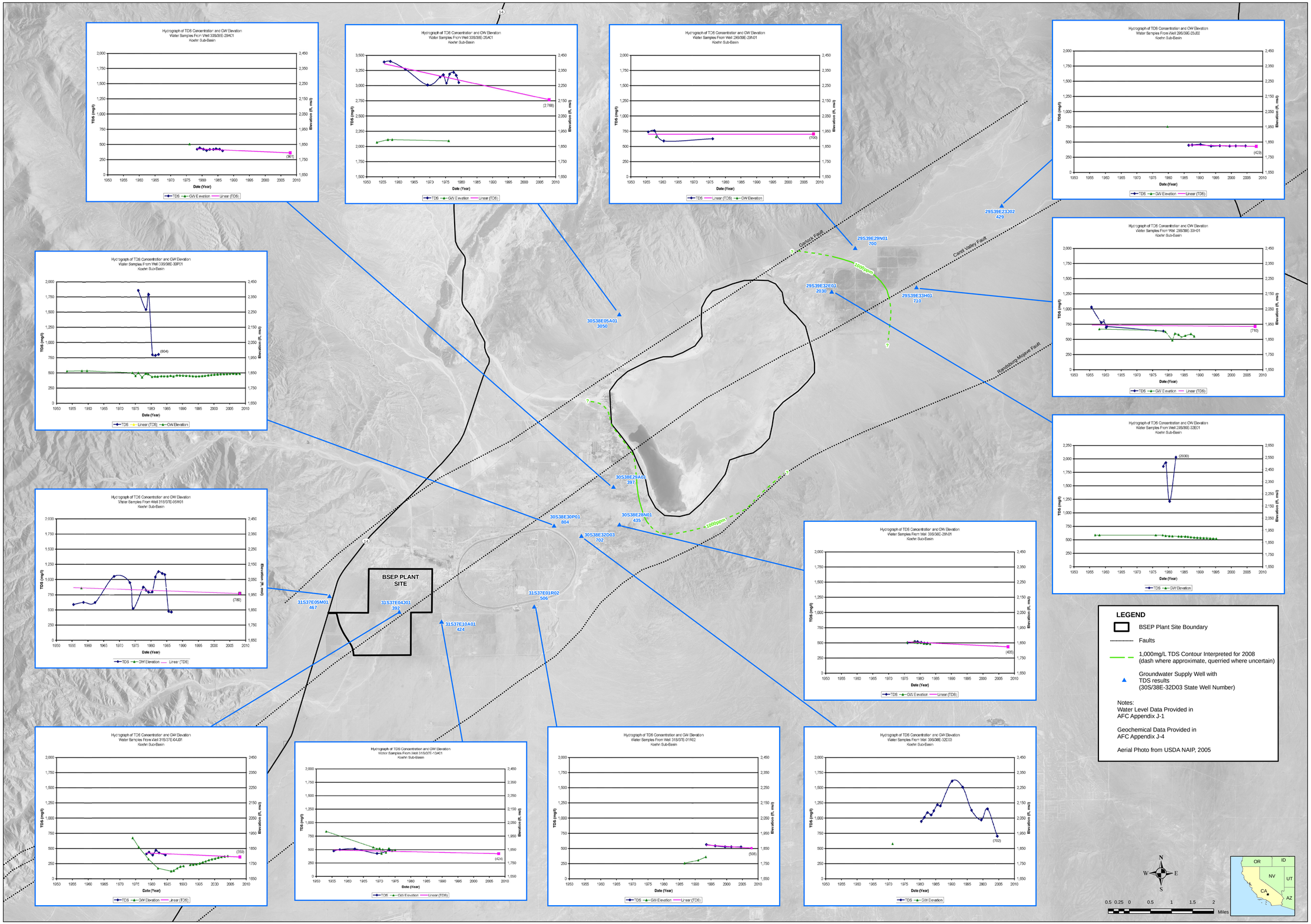
- This area would require significant investigation to determine if sufficient sustainable, poor quality water was available to meet project annual and peak water supply requirements. There is no guarantee that the water supply requirements would be met in this area, while water supply has been demonstrated in the area of the Project site.

- The groundwater basin in this area is constrained and does not appear to receive the same recharge by comparison to the west side of the Koehn Sub-basin. Limitations in storage and recharge could induce more significant impacts to this area of the groundwater basin.

- The impacts to pumping from multiple wells in the area are not known, but would be anticipated to be greater that the proposed project for the above-mentioned differences in aquifer geometry and local recharge.

- There is no certainty that water rights can be established for multiple well locations in this area of the Koehn Sub-basin.

J:\2007 Projects\10056-FPL\014-CCSP\AFC Beacon Energy LLC GIS\March 08\TDS-poster-no_active.mxd



LEGEND

- BSEP Plant Site Boundary
- Faults
- 1,000mg/L TDS Contour Interpreted for 2008 (dash where approximate, querried where uncertain)
- Groundwater Supply Well with TDS results (30S/38E-32D03 State Well Number)

Notes:
Water Level Data Provided in AFC Appendix J-1

Geochemical Data Provided in AFC Appendix J-4

Aerial Photo from USDA NAIP, 2005

BSEP

TDS TREND DATA POST 1976

PROJECT NUMBER: 10056-014-300

DATE: Jan. 2009

SCALE: as shown

FIGURE NUMBER: **96W1a**

SHEET NUMBER: X

Beacon Solar

ENSR | AECOM

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE BEACON SOLAR ENERGY PROJECT	DOCKET NO. 08-AFC-2

PROOF OF SERVICE
(Revised 1/13/09)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-2
1516 Ninth Street, MS-14
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT	**APPLICANT'S CONSULTANTS**
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Eric K. Solorio, Project Manager esolorio@energy.state.ca.us	Public Adviser publicadvisor@energy.state.ca.us

DECLARATION OF SERVICE

I, Lois Navarrot, declare that on January 26, 2009, I deposited copies of the attached **Beacon Energy Solar Project's Supplemental Responses to California Energy Commission Data Requests as Mailed to NextEra Energy, January 12, 2009** in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of the California Code of Regulations, title 20, sections 1209, 1209.5 and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

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

Lois Navarrot

Lois Navarrot