

CALIFORNIA ENERGY COMMISSION1516 NINTH STREET
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May 2, 2012

Ms. Susan Strachan
Strachan Consulting
P.O. Box 1049
Davis, CA 95617**DOCKET****02-AFC-4C**DATE MAY 02 2012RECD. MAY 02 2012**SUBJECT: WALNUT ENERGY CENTER 02-AFC-4C
DATA REQUESTS #11 THROUGH 17**

Dear Ms. Strachan:

On January 21, 2011, the Walnut Energy Center Authority filed a Petition for the Walnut Energy Center Project to modify Conditions of Certification limiting the amount of back-up water supply that can be used to operate the facility. The Petition is currently under review by California Energy Commission (Energy Commission) staff.

Staff is preparing an assessment of the Petition to determine compliance with the specific provisions of Title 20, California Code of Regulations, Section 1769 (a) (2) and (3). To complete this assessment, staff is requesting additional data as detailed in the attached Data Requests.

If you are unable to provide the information, or object to providing the requested information, please notify me within 20 days of receipt of this request. Any objections to the Data Requests must contain the reasons for not providing the information and the grounds for any objections (see Title 20, California Code of Regulations, section 1716). Written responses to the enclosed Data Requests are due to the Energy Commission staff on or before May 22, 2012.

Staff will schedule a meeting with you no sooner than 7 days after our receipt of the responses to the enclosed data requests to allow for staff review time.

If you have any questions, please call me at (916) 654-4745, or e-mail me at cstora@energy.state.ca.us.

Sincerely,

CHRISTINE STORA
Compliance Project Manager

cc: Jeffery D. Harris: Ellison, Schneider & Harris L.L.P.
Docket Unit

Walnut Energy Center (02-AFC-4C) Data Requests

Technical Area: Water Resources

Author: Abdel-Karim Abulaban, Ph.D., P. E.

These data requests pertain to the petition filed by the Walnut Energy Center (WEC) on January 11, 2011, seeking to amend Condition of Certification **SOIL&WATER-5**, which limits the use of shallow site groundwater for backup water supply. The owner requests the limitation be changed from an annual maximum of 51 acre-feet (AF) to two million gallons per day (maximum daily rate required for project operation). This change could lead to a maximum annual use of 1,800 acre-feet per year (AFY).

BACKGROUND

On April 16, 2012, staff received an e-mail submittal of a table which includes hourly power generation and water use data for the months of June and November 2010, and January and February 2011. Staff had previously requested this data in a telephone conversation with Susan Strachan during the week of March 28, 2012. Staff needs this data so we can analyze the frequency of recycled water supply interruptions, use of groundwater pumping by the power plant and determine whether there are power plant conditions that require use of increased volumes of groundwater that are beyond the control of the plant operators.

Staff has reviewed the hourly data and have further questions about the notes provided on the table and what the data represent. One of the notes on the table indicates, "This data is calculated from real time devices. The data is not Metered Data nor is it Quality Assured Data." Staff does not understand why metered data could not be provided. Also, the data indicates several occasions where there is water consumption, but no power generation. While staff understands that there can be a lag between water pumping and power generation for startup reasons, there were some periods of water pumping but no power generation for significant lengths of time. Staff needs to understand what the notes mean and why there are significant periods of time where water is being pumped and no power is being generated.

DATA REQUEST

- 11. Please explain the meaning of Note 2: "This data is calculated from real time devices. The data is not Metered Data nor is it Quality Assured Data."**
- 12. Please explain what the implications of this note are for the interpretation of the data provided in the table.**
- 13. Please explain why there are periods of water pumping when there is no power generation.**
- 14. Please provide a correlation between the generated power and the source of the water used to generate that power, show how the calculations were made, and explain any assumptions made to provide the correlation.**

BACKGROUND

Staff contrasted the water use with unit power generated on a monthly basis and noticed that the water use rate is higher for months when groundwater is used. However, preliminary calculations using the recent hourly data provided by WECA on April 16, 2012, showed that in general, the rate of groundwater consumption per unit power produced is lower when compared to recycled water.

DATA REQUESTS

- 15. Please explain the reason why water use rates (gallons per MWh) appear to increase whenever groundwater is used for some or all of the plant needs.**
- 16. Please explain why the water use rate derived based on monthly totals is generally higher in the months of January and February 2011 compared to other months, although temperatures are usually considerably lower during those months.**
- 17. Please explain the reason for the substantially high water use rate for the month of June 2010.**