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July 13, 2009

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DOCKET	
09-AFC-2	
DATE	JUL 13 2009
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Ms. Felicia Miller
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Almond 2 Power Plant (09-AFC-02)
Email Queries Set 1, Responses to CEC Staff Email Query 1

Dear Ms. Miller:

Attached please find one original of Turlock Irrigation District's responses to California Energy Commission Staff Email Query 1 for the Application for Certification for the Almond 2 Power Plant (09-AFC-02).

If you have any questions about this matter, please contact me at (916) 286-0249 or Susan Strachan at (530) 220-7038.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read 'Sarah Madams'.

Sarah Madams
AFC Project Manager

Attachment

cc: S. Strachan
R. Baysinger/TID

Supplement

Almond 2 Power Plant

(09-AFC-2)

Email Queries, Set 1

(Responses to Email Query 1)

Submitted to
California Energy Commission

Submitted by
Turlock Irrigation District

With Assistance from

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

July 2009

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Introduction

Attached are Turlock Irrigation District's (TID) responses to the California Energy Commission (CEC) Staff Email Query (EQ) Set 1, regarding Traffic and Transportation for the Almond 2 Power Plant Project's (A2PP) (09-AFC-02) Application for Certification (AFC).

Within each discipline area, the responses are presented in the same order as the CEC presented them and are keyed to the Email Query number. New or revised graphics or tables are numbered in reference to the Email Query number. For example, the first table used in response to Email Query 36 would be numbered Table EQ36-1. The first figure used in response to Email Query 42 would be Figure EQ42-1, and so on.

Traffic and Transportation (EQ-1)

Background

On June 18, 2009, Marie McLean/CEC Staff contacted Sarah Madams/CH2M HILL and Susan Strachan/Strachan Consulting via email and telephone regarding information needs for the Traffic and Transportation section.

Data Request

EQ-1. Please provide the same information provided in Table 5.12-5R for the county roads, as well as the following items for both state and county roads:

- Divided/Undivided
- Year ADT was counted
- Original daily demand
- Adjusted daily demand
- Truck percent
- Daily Demand with truck PCE=?

Response: Table EQ-1 presents the data requested for state facilities. No PCE factor was used because the units of the daily capacity are in vehicles per hour (please refer to Section 5.12.2.2.2 of the AFC); therefore, the ADTs in vehicles per hour did not need to be converted into passenger car equivalents. Additionally, the 2007 Caltrans counts were not adjusted by a standard growth factor to reflect 2008 conditions because it was estimated that traffic levels did not increase between 2007 and 2008.

As a result of this request, an additional review was performed on those tables provided in the AFC. A minor error was noticed in regards to how capacities were calculated, therefore, an adjusted set of k-factors were applied to better reflect planning level estimates of k-factors at capacity. With these adjustments, the daily LOS and V/C ratios in the existing and construction scenarios were updated. The daily LOS values change in some cases, but the conclusions remain the same for the existing conditions: one segment operates at an unacceptable level of service (I-205, west of I-5). The new results for the construction scenario are presented in Table EQ-2. With the changes made to the k-factors on State facilities (and therefore, the changes made to their capacities), the State facilities roadway segments would operate under construction conditions as shown in Table EQ-2. One segment still operates at an unacceptable level of service (I-205, west of I-5). All other segments continue to operate at an acceptable LOS, with no significant impacts from the construction traffic. Note that there are no changes to the local roadway segments LOS.

Table EQ-3 presents the data requested for local roadways. The truck percentages were not available at the time the study was conducted. No PCE factor was used as explained earlier.

TABLE EQ-1
State Facilities, Existing Conditions

Route	Location	Classification	# of Lanes	Median	K-factor ^d	Daily Capacity (veh/hour)	Original ADT ^d (veh/hour)	Year	2008 Adjusted ADT	Truck %	Adjusted ADT with Truck PCE	Daily V/C	Daily LOS	Acceptable LOS
SR 99	North of Crows Landing Road	Freeway ^a	6	Divided	8	150,000	118,000	2007	no adjustment made	12%	no adjustment needed	0.79	C	D
SR 99	South of Mitchell Road	Freeway ^a	6	Divided	8	150,000	108,000	2007	no adjustment made	12%	no adjustment needed	0.72	C	D
SR 132	East of El Vista Avenue	Principal Arterial ^b	4	Undivided	8	45,000	24,400	2007	no adjustment made	10%	no adjustment needed	0.54	A	D
SR 132	West of El Vista Avenue	Principal Arterial ^b	4	Undivided	8	45,000	26,600	2007	no adjustment made	10%	no adjustment needed	0.59	A	D
SR 132	West of Carpenter Road	Minor Arterial ^b	2	Undivided	8	25,000	14,400	2007	no adjustment made	12%	no adjustment needed	0.58	A	D
I-205	West of I-5	Freeway ^c	4	Divided	8	100,000	101,000	2007	no adjustment made	11%	no adjustment needed	1.01	F	D
I-5	North of I-205	Freeway ^c	10	Divided	8	250,000	160,000	2007	no adjustment made	5%	no adjustment needed	0.64	B	D
SR 120	West of SR 99	Freeway ^c	4	Divided	8	100,000	70,000	2007	no adjustment made	6%	no adjustment needed	0.70	B	D
I-580	North of SR 132	Freeway ^c	4	Divided	8	100,000	37,000	2007	no adjustment made	18%	no adjustment needed	0.37	A	D

Notes:

aSource: City of Ceres General Plan

bSource: City of Modesto General Plan

cFreeways - Source: 2007 Caltrans Traffic Counts

dPlanning level estimates of what K factors would be at capacity

TABLE EQ-2
State Facilities, Construction Conditions

Route	Location	# of Lanes	K-factor ^a	Daily Capacity (veh/hour)	Existing ADT ^b (veh/hour)	Daily Construction Trips Added	Percent of ADT	Construction Daily V/C Ratio	Construction Daily LOS	Existing Daily V/C	Existing Daily LOS	Acceptable LOS
SR 99	North of Crows Landing Road	6	8	150,000	118,000	178	<1%	0.79	C	0.79	C	D
SR 99	South of Mitchell Road	6	8	150,000	108,000	40	<1%	0.72	C	0.72	C	D
SR 132	East of El Vista Avenue	4	8	45,000	24,400	20	<1%	0.54	A	0.54	A	D
SR 132	West of El Vista Avenue	4	8	45,000	26,600	20	<1%	0.59	A	0.59	A	D
SR 132	West of Carpenter Road	2	8	25,000	14,400	20	<1%	0.58	A	0.58	A	D
I-205	West of I-5	4	8	100,000	101,000	20	<1%	1.01	F	1.01	F	D
I-5	North of I-205	10	8	250,000	160,000	20	<1%	0.64	B	0.64	B	D
SR 120	West of SR 99	4	8	100,000	70,000	20	<1%	0.70	B	0.70	B	D
I-580	North of SR 132	4	8	100,000	37,000	20	<1%	0.37	A	0.37	A	D

Notes:

^aPlanning level estimates of what K factors would be at capacity

^bFreeways - Source: 2007 Caltrans Traffic Counts

TABLE EQ-3
Local Roadways, Existing Conditions

Route	Location	Classification	# of Lanes	Median	Peak Hour Capacity (veh/hr)	Year	Original AM Peak Hour Volume (veh/hr)	2008 Adjusted AM Peak Volume	Truck %*	Adjusted AM Peak Volume with Truck PCE	AM Peak V/C	AM Peak LOS	Original PM Peak Hour Volume (veh/hr)	2008 Adjusted PM Peak Volume	Truck %*	Adjusted PM Peak Volume with Truck PCE	PM Peak V/C	PM Peak LOS	Acceptable LOS
Crows Landing Road	North of Hatch Road	Arterial	4	Undivided	3,100	2008	1986	no adjustment needed	5%	no adjustment needed	0.64	C	2795	no adjustment needed	3%	no adjustment needed	0.90	D	D
Crows Landing Road	North of Whitmore Avenue	Arterial	4	Undivided	3,100	2008	1472	no adjustment needed	5%	no adjustment needed	0.47	C	1828	no adjustment needed	3%	no adjustment needed	0.59	C	D
Crows Landing Road	South of Whitmore Avenue	Arterial	4	Undivided	3,100	2008	1213	no adjustment needed	5%	no adjustment needed	0.39	C	1386	no adjustment needed	3%	no adjustment needed	0.45	C	D
Whitmore Avenue	East of Crows Landing Road	Arterial	2	Undivided	1,550	2008	656	no adjustment needed	5%	no adjustment needed	0.42	C	1041	no adjustment needed	3%	no adjustment needed	0.67	C	D
Service Road	East of Central Avenue	Class B Expressway	2	Undivided	1,550	2008	460	no adjustment needed	5%	no adjustment needed	0.30	C	775	no adjustment needed	3%	no adjustment needed	0.50	C	D

*Not available at the time the study was conducted

Source: West Ceres Specific Plan Opportunities and Constraints Analysis, May 2008

Notes:

LOS - Level of Service

V/C Ratio - Volume-to-Capacity Ratio