URS

DOCKET	
08-AFC-8	
DATE	JUL 27 2010
RECD.	JUL 27 2010

July 27, 2010

Dockets Unit
California Energy Commission
1516 Ninth Street, MS 4
Sacramento, CA 95814

RE: Hydrogen Energy California Project
Application for Certification 08-AFC-8

On behalf of HECA LLC, the applicant for the above-referenced Hydrogen Energy California AFC, we are pleased to submit the enclosed document:

One print copy of Responses to CEC Questions from July 13, 2010 Correspondence.

This document is being submitted to Dockets electronically, and one printed copy is provided. One print copy is also being sent to each party on the Proof of Service list not marked "email preferred."

The enclosed document is being submitted to the CEC for docketing.

URS Corporation

Alison Drury

Alison Drury
Project Manager/Senior Environmental Planner

Enclosures

CC: Rod Jones (w/o enclosure)

URS Corporation
Post Montgomery Center
One Montgomery Street, Suite 900
San Francisco, CA 94104-4538
Tel: 415.896.5858
Fax: 415.882.9261
www.urscorp.com

Responses to CEC Questions from July 13, 2010 Correspondence

Revised Application for Certification (08-AFC-8)

for

HYDROGEN ENERGY CALIFORNIA

Kern County, California

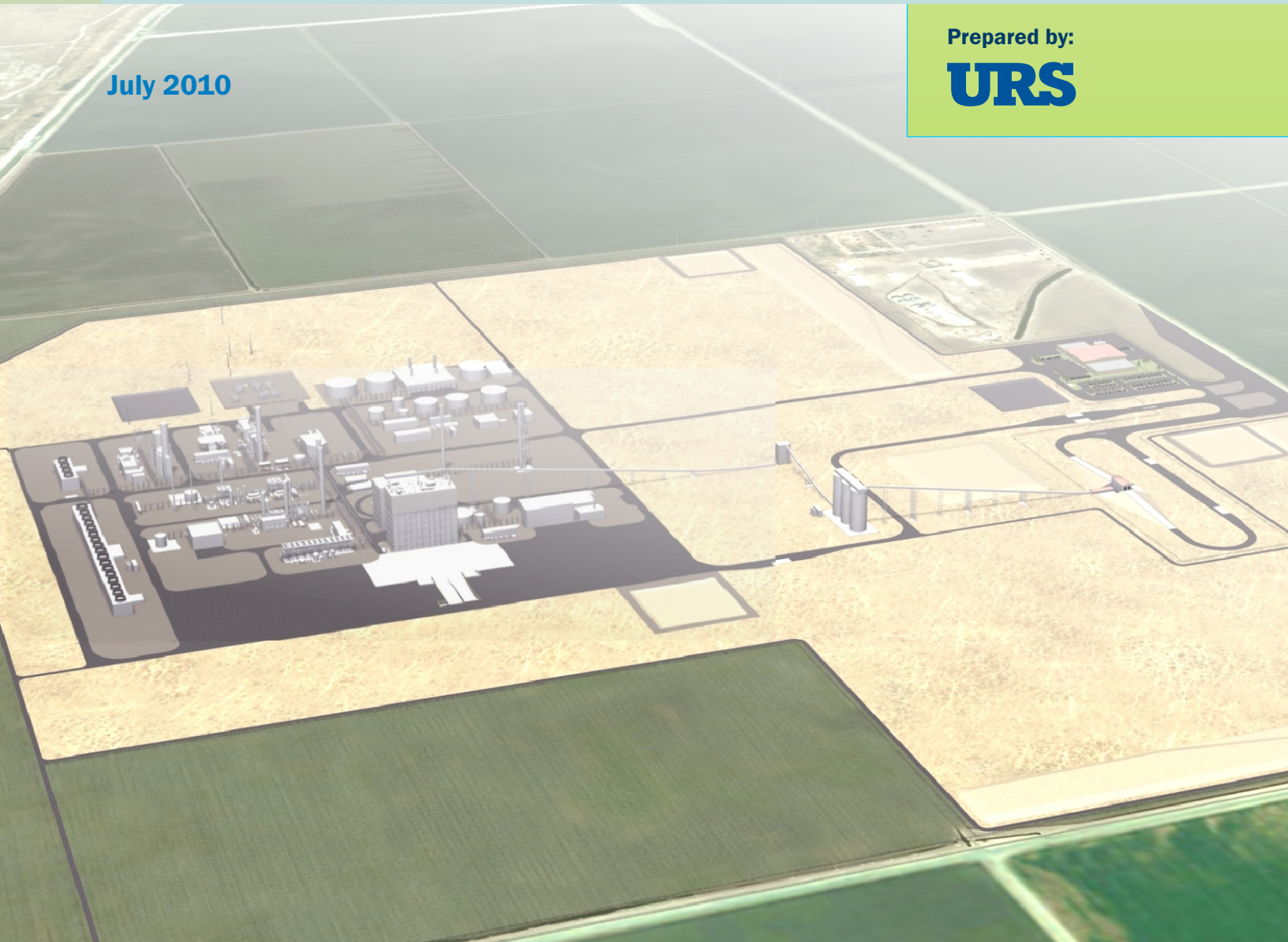
Prepared for:
Hydrogen Energy International LLC

hydrogen energy

Submitted to:
California Energy Commission

Prepared by:
URS

July 2010



Technical Area: Air Quality
Technical Lead: William Walters

QUESTION

1. Please provide the daily/annual Operations and Maintenance emissions estimate data.

RESPONSE

The requested information was previously provided in units of grams per second (g/s) in Appendix A of the response to Workshop Request 40. Attachment 1-1 to this response contains tables presenting the emissions from the total Operations and Maintenance (O&M) vehicles during operations in pounds per hour (lb/hour), pounds per day (lb/day), and tons per year.

ATTACHMENT 1-1

Summary of On-Site Operations and Maintenance Truck Emissions - HECA

Hydrogen Energy California LLC *7/16/2010*
HECA Project

1-hr Emission Rate (lb/hr) all Trucks

Pollutant	Gas LHDT1 Emissions	Diesel LHDT2 Emissions	Coke and Coal Trucks Running & Idling Emissions	Gasifier Solids Handling Running & Idling Emissions	All O&M Truck Emissions
CO	5.76E-03	2.31E-02	3.22E-01	2.72E-02	3.78E-01
NOx	1.61E-03	1.69E-02	7.82E-01	6.10E-02	8.62E-01
ROG	3.52E-04	2.14E-03	9.09E-02	8.45E-03	1.02E-01
SOx	2.77E-04	1.26E-04	1.48E-03	1.04E-04	1.98E-03
PM10	5.72E-03	5.94E-03	1.39E-02	8.05E-04	2.64E-02
PM2.5	5.53E-04	7.54E-04	4.49E-03	2.78E-04	6.07E-03

24-hr Emission Rate (lb/day) all Trucks

Pollutant	Gas LHDT1 Emissions	Diesel LHDT2 Emissions	Coke and Coal Trucks Running & Idling Emissions	Gasifier Solids Handling Running & Idling Emissions	All O&M Truck Emissions
CO	1.38E-01	5.55E-01	3.22E+00	5.09E-01	4.42E+00
NOx	3.86E-02	4.06E-01	7.82E+00	1.14E+00	9.41E+00
ROG	8.45E-03	5.13E-02	9.09E-01	1.58E-01	1.13E+00
SOx	6.64E-03	3.02E-03	1.48E-02	1.95E-03	2.64E-02
PM10	1.37E-01	1.43E-01	1.39E-01	1.51E-02	4.34E-01
PM2.5	1.33E-02	1.81E-02	4.49E-02	5.22E-03	8.15E-02

Annual Emission Rate (ton/yr) all Trucks

Pollutant	Gas LHDT1 Emissions	Diesel LHDT2 Emissions	Coke and Coal Trucks Running & Idling Emissions	Gasifier Solids Handling Running & Idling Emissions	All O&M Truck Emissions
CO	2.52E-02	1.01E-01	3.18E-01	1.97E-02	4.64E-01
NOx	7.05E-03	7.40E-02	7.72E-01	4.42E-02	8.97E-01
ROG	1.54E-03	9.36E-03	8.96E-02	6.13E-03	1.07E-01
SOx	1.21E-03	5.51E-04	1.46E-03	7.56E-05	3.29E-03
PM10	2.50E-02	2.60E-02	1.37E-02	5.83E-04	6.54E-02
PM2.5	2.42E-03	3.30E-03	4.42E-03	2.02E-04	1.04E-02

Summary of On Site Operations Truck Emissions - HECA

On-Site Trucks

Hydrogen Energy California LLC
HECA Project

7/16/2010

Transportation Information

- Onsite Vehicle =	20	trucks
- Vehicle year=	2010	
- Maximum annual mileage =	10,000	miles/truck-year

Notes

- Information Provided By Applicant
- Information Provided By Applicant
- All routine vehicular traffic is anticipated to travel exclusively on paved roads
- Assumed 15 mph average speed within HECA facility

Calculations for Trucks Operation Modeling per Truck

	Onsite O&M Trucks (@ 15 mph)
Mileage	
1-hr	1
24-hr	27
Annual average trucks or loads	10000

Emission Factor based on equation from AP-42, Chapter 13 (Paved Roads)

$$E = k\left(\frac{sL}{2}\right)^{0.65} \times \left(\frac{W}{3}\right)^{1.5} - C$$

E = particulate emission factor
k = particle size multiplier for particle size range and units of interest
sL = road surface silt loading
W = average weight (tons) of the vehicles traveling the road
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

Parameter	Value	Unit	
z	1.60E-02	lb/VMT	AP 42, Table 13.2-1.1: default k value for PM_{10}
C =	4.70E-04	lb/VMT	AP 42, Table 13.2-1.2: default C value for PM_{10}
sL=	3.10E-02	g/m^2	Default value from URBEMIS 9.2 for Kern County
W =	2.65E+00	ton	Default value from URBEMIS 9.2 for Kern County
E =	4.13E-04	lb/VMT	Estimated from the AP-42 formula
	1.87E-01	g/VMT	

EMFAC2007 Emission Factors (g/mi) For Truck Model year 2010, Scenario year 2015

	AERMOD	
Pollutant	**Gas LHDT1**	**Diesel LHDT2**
CO	2.29E-01	9.20E-01
NOx	6.40E-02	6.72E-01
ROG	1.40E-02	8.50E-02
SOx	1.10E-02	5.00E-03
PM10 *	2.27E-01	2.36E-01
PM2.5	2.20E-02	3.00E-02

** PM10 includes entrained road dust factor for paved roads obtained from AP-42 Ch. 13, using defaults from URBEMIS 9.2*
AERMOD input assumed 2015 scenario. HARP input assumed 2040 scenario (70 years average)
HARP PM_{10} emission factor does not include tire wear or break wear contributions

1-hr Emission Rates for AERMOD (g/s) per Truck

	AERMOD	
Pollutant	**Gas LHDT1**	**Diesel LHDT2**
CO	7.26E-05	2.92E-04
NOx	2.03E-05	2.13E-04
ROG	4.44E-06	2.70E-05
SOx	3.49E-06	1.59E-06
PM10	7.21E-05	7.49E-05
PM2.5	6.98E-06	9.51E-06

1-hr Emission Rate (lb/hr) all Trucks

Gas LHDT1	**Diesel LHDT2**
5.76E-03	2.31E-02
1.61E-03	1.69E-02
3.52E-04	2.14E-03
2.77E-04	1.26E-04
5.72E-03	5.94E-03
5.53E-04	7.54E-04

24-hour Emission Rates for AERMOD (g/s) per Truck

	AERMOD	
Pollutant	**Gas LHDT1**	**Diesel LHDT2**
CO	7.26E-05	2.92E-04
NOx	2.03E-05	2.13E-04
ROG	4.44E-06	2.70E-05
SOx	3.49E-06	1.59E-06
PM10	7.21E-05	7.49E-05
PM2.5	6.98E-06	9.51E-06

24-hr Emission Rate (lb/day) all Trucks

Gas LHDT1	**Diesel LHDT2**
1.38E-01	5.55E-01
3.86E-02	4.06E-01
8.45E-03	5.13E-02
6.64E-03	3.02E-03
1.37E-01	1.43E-01
1.33E-02	1.81E-02

Annual Emission Rates for AERMOD (g/s) per Truck

	AERMOD	
Pollutant	**Gas LHDT1**	**Diesel LHDT2**
CO	7.26E-05	2.92E-04
NOx	2.03E-05	2.13E-04
ROG	4.44E-06	2.70E-05
SOx	3.49E-06	1.59E-06
PM10	7.21E-05	7.49E-05
PM2.5	6.98E-06	9.51E-06

Annual Emission Rate (ton/yr) all Trucks

Gas LHDT1	**Diesel LHDT2**
2.52E-02	1.01E-01
7.05E-03	7.40E-02
1.54E-03	9.36E-03
1.21E-03	5.51E-04
2.50E-02	2.60E-02
2.42E-03	3.30E-03

Summary of Truck Emissions - HECA | **Petcoke, Coal, and Gasifier Solids Trucks**

Hydrogen Energy California LLC *7/16/2010*
HECA Project

Calculations for Trucks Operation Modeling

Data Supplied By Client				
Parameter	Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
	Running Emissions	Idling Emissions	Running Emissions	Idling Emissions
Distance Traveled (mi)*	1		0.5	
Per Truck Idle Time (hr)		1.17E-01		8.33E-02
Maximum number of trucks or loads:				
1-hr	18	18	2	2
3-hr	54	54	7	7
8-hr	144	144	13	13
24-hr	180	180	38	37.5
Annual average trucks or loads	35,500	35,500	2,900	2,900

Emission Factor based on equation from AP-42, Chapter 13 (Paved Roads)

$$E = k\left(\frac{sL}{2}\right)^{0.65} \times \left(\frac{W}{3}\right)^{1.5} - C$$

E = particulate emission factor
k = particle size multiplier for particle size range and units of interest
sL = road surface silt loading
W = average weight (tons) of the vehicles traveling the road
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

Parameter	Value	Unit	
k =	1.60E-02	lb/VMT	AP 42, Table 13.2-1.1: default k value for PM_{10}
C =	4.70E-04	lb/VMT	AP 42, Table 13.2-1.2: default C value for PM_{10}
sL=	3.10E-02	g/m^2	Default value from URBEMIS 9.2 for Kern County
W =	2.65E+00	ton	Default value from URBEMIS 9.2 for Kern County
E =	4.13E-04	lb/VMT	Calculated using AP-42 factors
	1.87E-01	g/VMT	Calculated using AP-42 factors

EMFAC2007 Emission Factors (g/mi or g/idle-hour) For Truck Model year 2010, Scenario year 2015

	Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Pollutant	Running Emissions	Idling Emissions	Running Emissions	Idling Emissions
CO	3.03E+00	4.37E+01	5.05E+00	4.37E+01
NOx	5.43E+00	1.23E+02	7.24E+00	1.23E+02
ROG	1.39E+00	7.74E+00	2.55E+00	7.74E+00
SOx	3.00E-02	6.20E-02	3.70E-02	6.20E-02
PM10 *	3.38E-01	1.14E-01	3.46E-01	1.14E-01
PM2.5	1.01E-01	1.04E-01	1.09E-01	1.04E-01

** PM10 includes entrained road dust factor for paved roads obtained from AP-42 Ch. 13, using defaults from URBEMIS 9.2*

1-hr Emission Rates for AERMOD (g/s) for all trucks

	Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Pollutant	Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
CO	1.51E-02	2.55E-02	1.40E-03	2.02E-03
NOx	2.71E-02	7.15E-02	2.01E-03	5.68E-03
ROG	6.94E-03	4.52E-03	7.07E-04	3.59E-04
SOx	1.50E-04	3.62E-05	1.03E-05	2.87E-06
PM10	1.69E-03	6.65E-05	9.62E-05	5.28E-06
PM2.5	5.05E-04	6.07E-05	3.03E-05	4.81E-06

1-hr Emission Rate (lb/hr) for all trucks

Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
1.20E-01	2.02E-01	1.11E-02	1.60E-02
2.15E-01	5.67E-01	1.59E-02	4.50E-02
5.50E-02	3.58E-02	5.61E-03	2.84E-03
1.19E-03	2.87E-04	8.15E-05	2.28E-05
1.34E-02	5.27E-04	7.63E-04	4.19E-05
4.00E-03	4.81E-04	2.40E-04	3.82E-05

24-hour Emission Rates for AERMOD (g/s) for all trucks

	Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Pollutant	Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
CO	6.31E-03	1.06E-02	1.10E-03	1.58E-03
NOx	1.13E-02	2.98E-02	1.57E-03	4.44E-03
ROG	2.89E-03	1.88E-03	5.53E-04	2.80E-04
SOx	6.25E-05	1.51E-05	8.03E-06	2.24E-06
PM10	7.05E-04	2.77E-05	7.52E-05	4.12E-06
PM2.5	2.10E-04	2.53E-05	2.37E-05	3.76E-06

24-hr Emission Rate (lb/day) for all trucks

Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
1.20E+00	2.02E+00	2.09E-01	3.01E-01
2.15E+00	5.67E+00	2.99E-01	8.44E-01
5.50E-01	3.58E-01	1.05E-01	5.33E-02
1.19E-02	2.87E-03	1.53E-03	4.27E-04
1.34E-01	5.27E-03	1.43E-02	7.85E-04
4.00E-02	4.81E-03	4.50E-03	7.16E-04

Annual Emission Rates for AERMOD (g/s) for all trucks

	Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Pollutant	Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
CO	3.41E-03	5.74E-03	2.32E-04	3.35E-04
NOx	6.11E-03	1.61E-02	3.33E-04	9.40E-04
ROG	1.56E-03	1.02E-03	1.17E-04	5.93E-05
SOx	3.38E-05	8.14E-06	1.70E-06	4.75E-07
PM10	3.81E-04	1.50E-05	1.59E-05	8.74E-07
PM2.5	1.14E-04	1.37E-05	5.01E-06	7.97E-07

Annual Emission Rate (ton/yr) for all trucks

Coke and Coal Trucks (@ 10 mph)		Onsite Gasifier Solids Handling (@ 5 mph)	
Running Emissions	Idling Emissions (at each Idle Point)	Running Emissions	Idling Emissions (at each Idle Point)
1.18E-01	1.99E-01	8.07E-03	1.16E-02
2.12E-01	5.59E-01	1.16E-02	3.26E-02
5.43E-02	3.53E-02	4.07E-03	2.06E-03
1.17E-03	2.83E-04	5.91E-05	1.65E-05
1.32E-02	5.20E-04	5.53E-04	3.03E-05
3.95E-03	4.74E-04	1.74E-04	2.77E-05

QUESTION

2. Please provide employee vehicle emissions for operation (alternatively, provide assumptions on the number of daily employees and agreeable round distance travel per trip, perhaps Eastern Bakersfield to the Project Site for example would be acceptable so we can calculate).

RESPONSE

The total employee vehicle count was provided in the Traffic and Transportation section of the Revised AFC in Table 5.10-4. A maximum of 120 employee vehicles per day are expected. The Project Description (Section 2.5.5 of the Revised AFC), describes that 100 of these employees are full-time workers. The remainder are contract employees. As described in the Traffic and Transportation section of the Revised AFC, the workers are assumed to come from Bakersfield and adjoining communities, conservatively about 30 miles. Emissions from employee commuting have been estimated based on the above information and are provided in the tables in Attachment 2-1.

ATTACHMENT 2-1

HECA Employee Vehicle Commuting Emissions

Hydrogen Energy California LLC *7/16/2010*

HECA Project

EMISSION FACTOR FOR ONROAD VEHICLES

Onroad Vehicle			EF (lbs/mile) TOC	CO	NOx	PM_{10}	SO_2	$PM_{2.5}$	CO_2	N_2O	CH_4	CO_2e
Personal Commuting Vehicles			2.11E-04	6.92E-03	7.51E-04	6.94E-05	7.72E-06	3.64E-05	8.01E-01	9.55E-05	1.90E-04	8.35E-01

Daily Vehicle Count	Round Trip Distance (miles/day vehicle)	Daily Total VMT	Daily Emissions (lbs/day) TOC	CO	NO_x	PM_{10}	SO_2	$PM_{2.5}$	CO_2	N_2O	CH_4	CO_2e
120	60	7,200	1.52E+00	4.98E+01	5.40E+00	5.00E-01	5.56E-02	2.62E-01	5.77E+03	6.88E-01	1.37E+00	6.01E+03

Annual Total VMT			Annual Emission Rate (tons/year) TOC	CO	NO_x	PM_{10}	SO_2	$PM_{2.5}$	CO_2	N_2O	CH_4	CO_2e
2,628,000			2.77E-01	9.09E+00	9.86E-01	9.13E-02	1.01E-02	4.78E-02	1.05E+03	1.26E-01	2.49E-01	1.10E+03

Notes:

Average commuting distance is based on the distance to Bakersfield, approximately 30 miles one way

Emission factors from EMFAC2007 (version 2.3) for year 2010

Emission factors for personal commuting vehicles are based on the assumption 50% LDA and 50% LDT

CH_4 and N_2O emission factor for personal commuting vehicles is based on the average factor for gasoline and diesel passenger vehicles from CCAR, GRP Version 3.0, Table C.5

grams to pounds conversion = 2.205E-03

CO_2 GWP (SAR, 1996) = 1

CH_4 GWP (SAR, 1996) = 21

N_2O GWP (SAR, 1996) = 310

Fugitive Dust Emissions

Travel on paved road

$E = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C] (1 - P/4N)$ EPA AP-42 Section 13.2.1 Paved Roads Equation 2

E = particulate emission factor (lb/VMT),

k = particle size multiplier for particle size range and units of interest

0.32 sL = road surface silt loading (grams per square meter) (g/m^2),

CARB - Emission Inventory Database - Section 7.9 Entrained Paved Road Dust - Major roads (emission inventory code: 640-641-5400-0000), July 1997

W = average weight (tons) of the vehicles traveling the road, and

C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

	$PM_{2.5}$	PM_{10}
k	2.40E-03	1.60E-02
C	3.60E-04	4.70E-04

37 P = Mean number of days per year with at least 0.01 inches of precipitation (from WRCC for Bakersfield Airport Station)

365 N = number of days in the year (averaging period)

Vehicle Type	Daily Vehicle Count	Round Trip Distance (miles/day vehicle)	Daily Total VMT (all vehicles)	Annual Total VMT (all vehicles)	Mean Vehicle Weight (tons)	PM_{10} EF (lbs/VMT)	$PM_{2.5}$ EF (lbs/VMT)	PM_{10} Emissions (lbs/day)	$PM_{2.5}$ Emissions (lbs/day)	PM_{10} Emissions (ton/yr)	$PM_{2.5}$ Emissions (ton/yr)
Personal Commuting Vehicles	120	60	7,200	2,628,000	2	2.12E-03	3.60E-05	1.53E+01	2.59E-01	2.79E+00	4.73E-02

QUESTION

3. Please provide a summary of daily normal operating emissions. We found equipment daily values, but no totals or the proper logic to add them up into a reasonable normal daily maximum value. There are so many potential upset condition emission variables that affect pollutants differently, we'll just present those separately noting that maximum daily emissions will increase, or even decrease, for certain pollutants during various non-normal (such as startup) and upset conditions.

RESPONSE

The daily operations emissions were provided in Appendix A of the response to Workshop Request 40. For permitting and modeling purposes, the maximum daily emissions were estimated for each permit unit. Although it is not expected that every permit unit will operate at its maximum permitted level in a given hour or day, it may be possible. The following permit units will not continuously operate at the maximum permitted level:

- CTG/HRSG – maximum permit level incorporates startup and shutdown emissions. During non-startup or shutdown hours the NO_2, CO, and VOC emissions will be lower.

- Gasification Flare – maximum emissions encompass operating during a gasifier startup, shutdown or CTG wash. Normal continuous emissions come only from the pilot.

- SRU Flare – maximum emissions encompass operating during a gasifier startup or shutdown. Normal continuous emissions come only from the pilot.

- CO_2 Vent – Emissions come from this source when the CO_2 cannot be sequestered. Ideally no emissions would come from this source.

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 *HYDROGEN ENERGY CALIFORNIA PROJECT*

Docket No. 08-AFC-8

PROOF OF SERVICE LIST (Rev. 6/22/10)

APPLICANT

Gregory D. Skannal
Tiffany Rau
Rick Harrison
Hydrogen Energy International LLC
One World Trade Center, Suite 1600
Long Beach, CA 90831
gregory.skannal@hydrogenenergy.com
tiffany.rau@hydrogenenergy.com
rick.harrison@hydrogenenergy.com

Asteghik Khajetoorians,
Senior BP Legal Attorney
BP America, Inc.
6 Centerpointe Drive, LPR 6-550
La Palma, CA 90623
Asteghik.Khajetoorians@bp.com

APPLICANT'S CONSULTANT

***Dale Shileikis, Vice President**
Energy Services Manager
Major Environmental Programs
URS Corporation
One Montgomery Street, Suite 900
San Francisco, CA 94104-4538
dale_shileikis@urscorp.com

COUNSEL FOR APPLICANT

Michael J. Carroll
Latham & Watkins, LLP
650 Town Center Drive, 20th Fl.
Costa Mesa, CA 92626-1925
michael.carroll@lw.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

INTERVENORS

Tom Frantz
Association of Irritated Residents
30100 Orange Street
Shafter, CA 93263
tfrantz@bak.rr.com

Kern-Kaweah Chapter
of the Sierra Club
Babak Naficy
Law Offices of Babak Naficy
1504 Marsh Street
San Luis Obispo, California 93401
babaknaficy@sbcglobal.net

Environmental Defense Fund (EDF)
Timothy O'Connor, Esq.
1107 Ninth St., Suite 540
Sacramento, CA 95814
toconnor@edf.org

Natural Resources Defense Council (NRDC)
George Peridas
111 Sutter Street, 20th Fl.
San Francisco, CA 94104
gperidas@nrdc.org

ENERGY COMMISSION

JAMES D. BOYD
Vice Chair and Presiding Member
jboyd@energy.state.ca.us

JEFFREY D. BYRON
Commissioner and Associate Member
jbyron@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Kristy Chew
Adviser to Commissioner Boyd
e-mail service preferred
kchew@energy.state.ca.us

Rod Jones
Project Manager
rjones@energy.state.ca.us

Lisa De Carlo
Staff Counsel
ldecarlo@energy.state.ca.us

Jennifer Jennings
Public Adviser's Office
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Alison Drury, declare that on July 27, , 2010, I served and filed copies of the attached Responses to CEC Questions from July 13, 2010 Correspondence, dated July , 2010. 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: **[www.energy.ca.gov/sitingcases/hydrogen_energy]**.

The documents have been sent to both the other 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

x by personal delivery or by depositing in the United States mail at San Francisco 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 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-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.