



CITY OF SUNNYVALE REPORT ZONING ADMINISTRATOR HEARING

November 10, 2010

File Number: 2010-7750

Permit Type: Variance

Location: 1252 Orleans Drive (near E. Moffett Park Dr.) (APN: 110-36-010)

Applicant/Owner: Bloomenergy / Oaw Orleans 1252 LLC

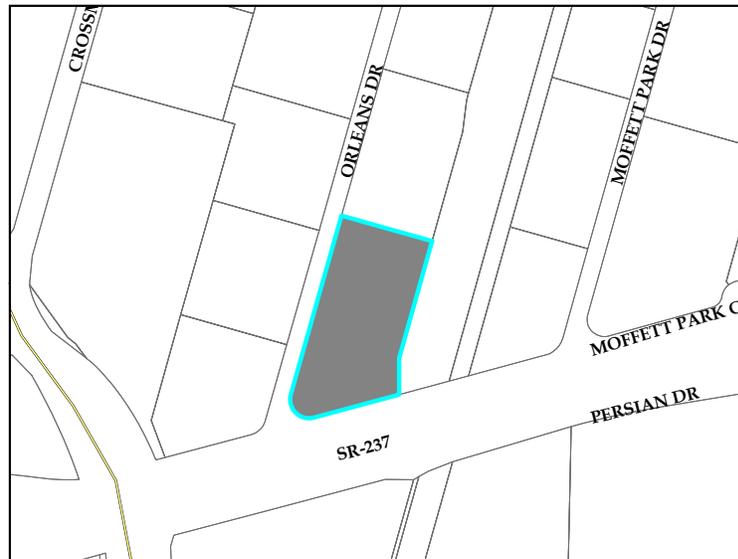
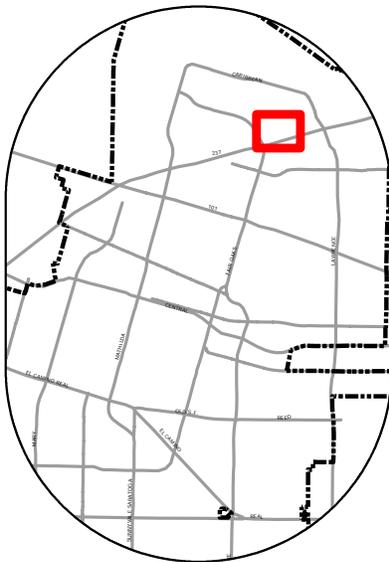
Staff Contact: Noren Caliva, Associate Planner, (408) 730-7637

Project Description: To allow mechanical equipment (two fuel cell boxes) between the face of the building and street.

Reason for Permit: A Variance is required to allow mechanical equipment to be located between the face of a building and street.

Issues: Aesthetic

Recommendation: Approve with Conditions



500

Feet

PROJECT DESCRIPTION

	Existing	Proposed
General Plan:	Moffett Park Specific Plan	Same
Zoning District:	Moffett Park Industrial	Same
Lot Size:	169,544 sq. ft.	Same
Total Sq. Ft. on Site:	53,893 sq. ft.	Same
Parking:	166	Same
Total Landscaping:	41,856 sq. ft. (25% of lot)	41,391 sq. ft. (24% of lot)

Previous Planning Projects related to Subject Application The existing building was originally constructed in 1979 as part of a two-building campus for a single tenant. Since then, the two buildings have been leased separately and the lot was subdivided with one building on each lot. Several staff-level permits have been granted for signage and screened mechanical equipment.	Yes
Deviations from Standard Zoning Requirements The applicant is requesting a deviation from Sunnyvale Municipal Code (SMC) Section 19.48.100, which prohibits mechanical equipment from being installed between the face of a building and street. All setback requirements are met.	Yes

Use Description: The applicant proposes to install two unscreened ground-mounted fuel cell boxes on their site. The primary use of the fuel cell boxes is to provide energy to power the site. The applicant's description letter further states that the location of the fuel cell boxes will provide an opportunity for customers to view the boxes from the parking lot area and streets (see Attachment D). No modifications are proposed to the existing building.

The fuel cell boxes contain a limited amount of hazardous materials (see Attachment C). Staff consulted with the Department of Public Safety, who expressed no concerns. The site is surrounded by industrial uses to the north, east and west property lines and State Route 237 to the south.

Site Layout: The fuel cell boxes will be located within an existing landscaped area, approximately 80 feet away from the property line along Moffett Park Drive and 130 feet away from the property line facing Orleans Drive. Each box is approximately 7 feet tall, 26 feet wide and 8 feet deep. The boxes will be placed side-by-side, with the two boxes totaling 52 feet in width facing Moffett Park Drive.

An existing 6-foot tall chain link adjacent to the building will be expanded by approximately 4 feet to accommodate control panels for the fuel cell boxes. The expanded fence and wooden slats will match the existing fence and will provide full screening for the control panels.

Aesthetics: The fuel cell boxes will be visible from both street frontages and will be made of high-quality metal material with a smooth finish. The boxes will be located in back of the existing parking lot area and will be partially screened by mature landscaping along the street frontages. Due to the ample distance to the street frontages and surrounding industrial uses and freeway, staff finds that the aesthetic impacts to the neighborhood will be minimal.

Parking: There are a total of 166 parking spaces on-site. The proposed project will not impact parking or circulation patterns of the site, as no modifications to the parking lot area are proposed.

Landscaping: To accommodate the ground-mounted units, approximately 465 square feet of landscaping will be removed. The plans also include removal of two existing trees. The applicant has subsequently determined that these trees can be relocated behind the fuel cell units (see Attachment A). The resulting landscaped area exceeds the minimum required by the Code.

Public Contact: 17 notices were sent to surrounding property owners and residents adjacent to subject site in addition to standard noticing practice. No letters were received.

Environmental Determination: A Categorical Exemption Class 5 (minor changes in use) relieves this project from CEQA provisions.

FINDINGS

In order to approve the Variance the following findings must be made:

1. Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district, **and**

Siting options for the fuel cell boxes are limited, as the existing service yard, loading areas and parking spaces stretch along the entire back of the building. The proposed location is ideal, as no parking spaces will have to be removed, and the fuel cell boxes will be directly adjacent to existing power and water sources. The property is a corner lot and the proposed location will result in the least site disturbance.

2. The granting of the variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district, **and**

The fuel cell boxes are located at least 80 feet away from both street frontages, behind parking lot and landscaped areas. The site is also surrounded by existing industrial businesses and State Route 237 along the

most impacted street frontage. The boxes will be made of high-quality metal material with a smooth finish. Based on the limited hazardous materials associated with the fuel cell boxes and distance from residential properties, staff does not expect impacts on public safety. Therefore, staff finds that visual and safety impacts to the existing neighborhood are minimal.

3. Upon granting of the variance, the intent and purpose of the ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.

Approval of the project does grant the applicant a special privilege, as the intent of the ordinance to minimize visual impacts of unsightly mechanical equipment is met.

ALTERNATIVES:

1. Approve the Variance with recommended Conditions in Attachment A.
2. Approve the Variance with modifications.
3. Deny the Variance.

RECOMMENDATION

Alternative 1. Approve the Variance with recommended Conditions in Attachment A.

Reviewed by:

Shaunn Mendrin

Senior Planner

Prepared By: Noren Caliva, Associate Planner

Attachments:

- A. Standard Requirements and Recommended Conditions of Approval
- B. Site and Architectural Plans
- C. Equipment Specifications
- D. Letter from the Applicant
- E. Variance Justifications

**RECOMMENDED
CONDITIONS OF APPROVAL AND
STANDARD DEVELOPMENT REQUIREMENTS
November 10, 2010**

Planning Application 2010-7750

1252 Orleans Drive

Variance to allow mechanical equipment (two fuel cell boxes) between the face of the building and street.

The following Conditions of Approval [COA] and Standard Development Requirements [SDR] apply to the project referenced above. The COAs are specific conditions applicable to the proposed project. The SDRs are items which are codified or adopted by resolution and have been included for ease of reference, they may not be appealed or changed. The COAs and SDRs are grouped under specific headings that relate to the timing of required compliance. Additional language within a condition may further define the timing of required compliance. Applicable mitigation measures are noted with "Mitigation Measure" and placed in the applicable phase of the project.

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following Conditions of Approval and Standard Development Requirements of this Permit:

GC: THE FOLLOWING GENERAL CONDITIONS OF APPROVAL AND STANDARD DEVELOPMENT REQUIREMENTS SHALL APPLY TO THE APPROVED PROJECT.

GC-1. CONFORMANCE WITH APPROVED PLANNING APPLICATION:

All building permit drawings and subsequent construction and operation shall substantially conform with the approved planning application, including: drawings/plans, materials samples, building colors, and other items submitted as part of the approved application. Any proposed amendments to the approved plans or Conditions of Approval are subject to review and approval by the City. The Director of Community Development shall determine whether revisions are considered major or minor. Minor changes are subject to review and approval by the Director of Community Development. Major changes are subject to review at a public hearing. [COA] [PLANNING]

GC-2. USE EXPIRATION:

The approved Permit for the use shall expire if the use is discontinued for a period of one year or more. [SDR] (PLANNING)

GC-3. PERMIT EXPIRATION (ORDINANCE 2895-09):

The Use Permit shall be valid for three (3) years from the date of approval by the final review authority (as adopted by City Council on April 21, 2009, RTC 09-094). Extensions of time may be considered, for a maximum of two one year extensions, if applied for and approved prior to the expiration of the permit approval. If the approval is not exercised within this time frame, the permit is null and void. [SDR] (PLANNING)

BP: THE FOLLOWING SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS SUBMITTED FOR ANY DEMOLITION PERMIT, BUILDING PERMIT, GRADING PERMIT, AND/OR ENCROACHMENT PERMIT AND SHALL BE MET PRIOR TO THE ISSUANCE OF SAID PERMIT(S).

BP-1. CONDITIONS OF APPROVAL:

Final plans shall include all Conditions of Approval included as part of the approved application starting on sheet 2 of the plans. [COA] [PLANNING]

BP-2. RESPONSE TO CONDITIONS OF APPROVAL:

A written response indicating how each condition has or will be addressed shall accompany the building permit set of plans. [COA] [PLANNING]

BP-3. BLUEPRINT FOR A CLEAN BAY:

The building permit plans shall include a "Blueprint for a Clean Bay" on one full sized sheet of the plans. [SDR] [PLANNING]

BP-4. RELOCATION OF TREES:

The two existing impacted trees shall be relocated to ensure proper growth and survival, and shall be shown on the building permit plans. [COA] [PLANNING]

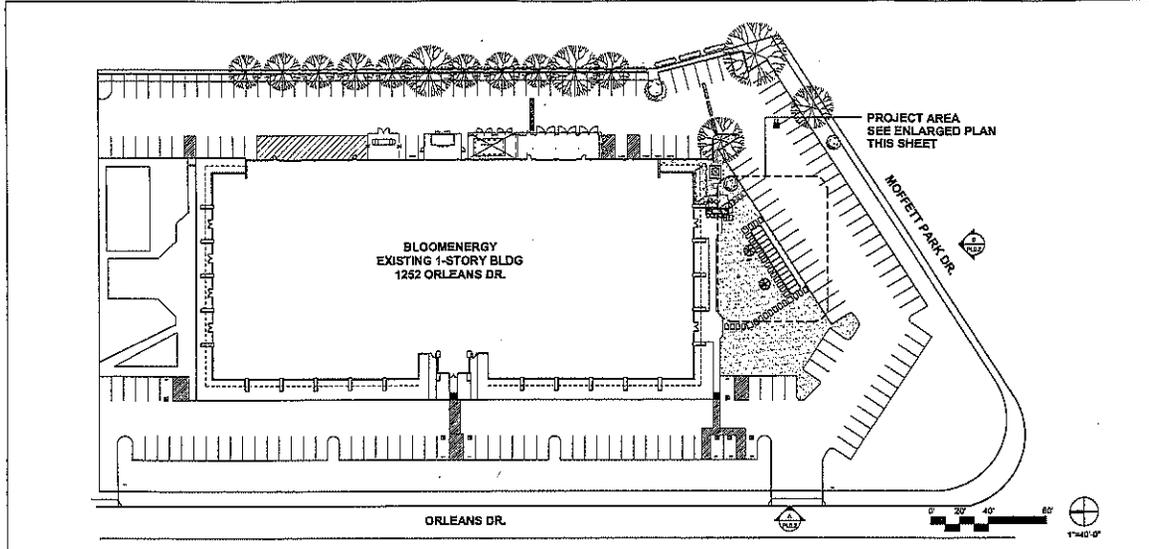
AT: THE FOLLOWING CONDITIONS OF APPROVAL AND STANDARD DEVELOPMENT REQUIREMENTS SHALL BE COMPLIED WITH AT ALL TIMES THAT THE USE PERMITTED BY THIS PLANNING APPLICATION OCCUPIES THE PREMISES.

AT-1. TREES:

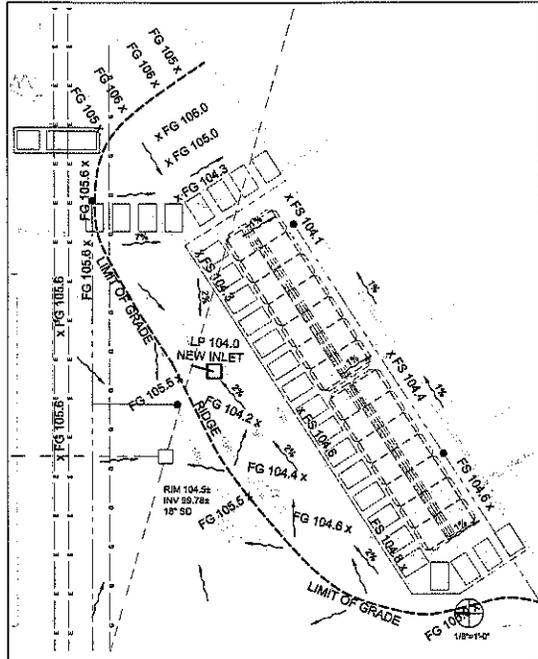
No trees are approved for removal as part of this project. [COA] [PLANNING]

- AT-2. NOISE:
The fuel cell boxes shall comply with Sunnyvale noise regulations
[COA] [PLANNING]
- AT-3. SIGNS:
No signs may be displayed on the fuel cell boxes, unless approved
through a sign permit. [COA] [PLANNING]

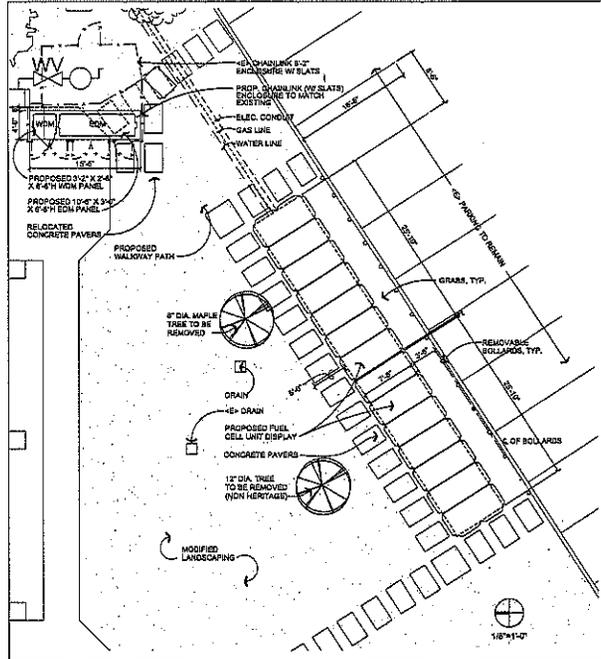
SITE PLAN



PROPOSED ROUGH GRADING PLAN



ENLARGED SITE PLAN



PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION OF (2) SELF-CONTAINED FUEL CELL DISPLAY SYSTEMS LOCATED AT THE EXTERIOR OF AN EXISTING SINGLE-STORY LAB / OFFICE BUILDING.

THERE WILL ALSO BE (2) CONTROL PANELS LOCATED ADJACENT TO AN EXISTING FENCE ENCLOSURE THAT WILL BE EXTENDED TO PROVIDE SCREENING FOR THE PANELS.

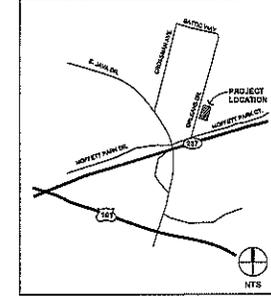
DRAWING INDEX

PL0.1	TITLE SHEET AND PROPOSED SITE PLAN
PL0.2	PROPOSED EXTERIOR ELEVATIONS AND PHOTOGRAPHS

PROJECT DATA

SITE AREA: 199,844 S.F.
 BUILDING AREA: 53,823 S.F.
 AREA OF WORK: 850 S.F. (EXT. ENCLOSURE)
 CONSTRUCTION TYPE: IIA-B
 OCCUPANCY: \leq A-3/BF-1
 BUILDING CODE: 2008 IBC / 2007 CBC
 FIRE CODE: 2008 IPC / 2007 CPC
 MECHANICAL CODE: 2008 UMC / 2007 CMC
 ELECTRICAL CODE: 2008 NEC / 2007 CEC
 PLUMBING CODE: 2008 UPC / 2007 CPC
 SPRINKLERED: EXISTING FULLY SPRINKLERED
 PARKING: EXISTING, SEE BELOW
 PARCEL NUMBER: APN # 110-36-010
 ZONING CLASSIFICATION: M-3

LOCATION



PARKING DATA

FOR REFERENCE ONLY
 ALL STALLS ARE UNIFORM-TYPE STALLS, MIN. 4.0M.

PARKING - REQUIRED

UNIFORM	122 SPACES
50 S.F. PER SPACE	8 SPACES
INCL. ACCESSIBLE - CAR	1 SPACES
INCL. ACCESSIBLE - VAN	1 SPACES
TOTAL	132 PARKING SPACES

PARKING - PROVIDED

UNIFORM (8' X 12')	100 SPACES
INCL. ACCESSIBLE - CAR (8' X 12')	8 SPACES
INCL. ACCESSIBLE - VAN (8' X 14')	1 SPACES
TOTAL	109 PARKING SPACES (23 PARKING SPACES REMOVED)

GENERAL NOTES

1. VERIFY EXISTING CONDITIONS ON-SITE & REVIEW MODIFICATIONS REQUIRED TO SUIT *S* CONDITIONS PRIOR TO FABRICATIONS AND INSTALLATIONS.
2. *TYP* - REPEAT WHEREVER THIS CONDITION OCCURS.
3. *RIM* - REPEAT & MODIFY AS REQUIRED TO SUIT CONDITION.

Bloomenergy™

FUEL CELL DISPLAY

1252 ORLEANS DRIVE
 SUNNYVALE, CA 94089

CAS CONSULTING ENGINEERS ARCHITECTS
 12211 Overton Blvd
 Mission Viejo, CA 94942
 TEL: 949.862.2010
 FAX: 949.862.2818
 www.cas-engineers.com

CONTRACT LOGO / LICENSE STAMP

PROJECT / CLIENT

Bloomenergy™

FUEL CELL DISPLAY
 ISSUED FOR PLANNING VARIANCE
 1252 ORLEANS DRIVE
 SUNNYVALE, CA 94089

REV.	DESCRIPTION	DATE
1	ISSUED FOR PLANNING VARIANCE	11/10/10

Page 1 of 2

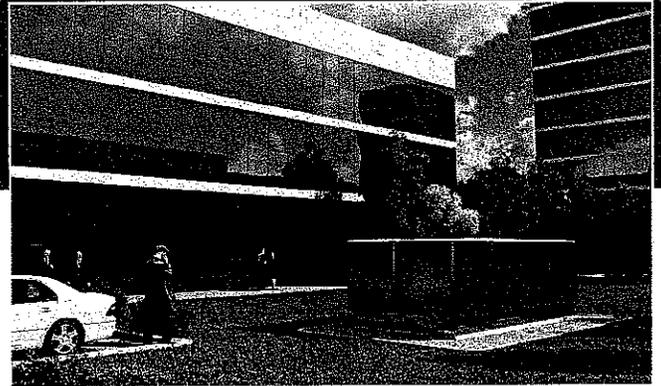
ATTACHMENT B

Bloomenergy

ATTACHMENT C
Page 1 of 3

ES-5000 Energy Server

Welcome to clean, quiet electricity that's always on. Welcome to the ES-5000 Energy Server.



CLEAN POWER ON DEMAND

Bloom Energy's ES-5000 delivers clean power to meet your base load electricity needs. Rain or shine, the ES-5000 seamlessly produces power in parallel with the utility grid. Your new power source will reduce your emissions and save you money.

RELIABLE RISK MITIGATION

The ES-5000 operates at unmatched electrical efficiencies. That means that it consumes less fuel and produces less CO₂ than competing technologies. As the aging grid infrastructure and rising fuel costs cause utility prices to soar, the economic benefits of your ES-5000 will continue to increase.

HIGH-TECH, LOW-COST

Utilizing planar solid oxide fuel cell (pSOFC) technology first developed for NASA's Mars program, the ES-5000 produces clean power at down-to-earth prices. Unlike other fuel cell technologies, Bloom's SOFCs are well suited to high-volume, low-cost manufacturing.

The ES-5000 employs a modular architecture that enables the total installation size to be tailored to your base load electricity demand. Installations can scale from 100 kW – 1 MW or more.

ALL-ELECTRIC POWER

The ES-5000's superior electrical efficiency eliminates the need for complicated CHP systems, and expands the siting opportunities available to you. Your ES-5000 can be installed outdoors in hours rather than months or years.

FUEL FLEXIBILITY

The ES-5000 can run on natural gas, as well as, renewable fuels like biogas. You choose what works for you. Onsite fuels can provide added insurance for your critical loads, and the ES-5000 can switch between fuels on-the-fly.

Future generations of Bloom Energy's Energy Servers will offer the unique capacity to operate as an energy storage device, thus creating a bridge to a 100% renewable energy future.

About Bloom Energy

Bloom Energy is making clean, reliable energy affordable. Our unique on-site power generation systems utilize an innovative fuel cell technology with roots in NASA's Mars program. By leveraging breakthrough advances in materials science, Bloom Energy systems are among the most efficient energy generators; providing for significantly reduced operating costs and dramatically lower greenhouse gas emissions. By generating power where it is consumed, Bloom Energy offers increased electrical reliability and improved energy security, providing a clear path to energy independence.

News & Awards

- Newsweek's Top 10 Eco-Friendly Companies
- CNN/Money Ten Game Changing Startups
- CNBC "Cutting Edge Energy"

Headquarters:

Sunnyvale, California

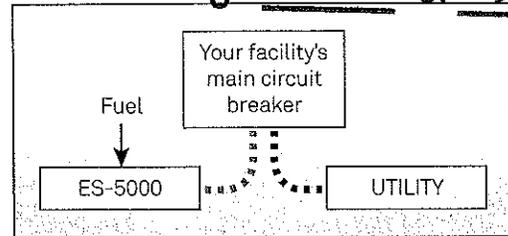
For More Information:

info@bloomenergy.com

ES-5000 Energy Server

YOUR POWER IS SECURE

The ES-5000 has been designed in compliance with Underwriters Laboratories (UL) and a variety of safety standards, and is backed by a comprehensive warranty. The ES-5000 actively communicates with Bloom Energy's network operations center. Should the system require unscheduled maintenance, we'll be deploying a solution before you even know there's a problem.



Technical Highlights	
Inputs	
Fuels	Natural Gas, Directed Biogas
Input fuel pressure	15 psig
Fuel required @ rated power	0.661 MMBtu/hr of natural gas
Water required (for startup only)	120 gallons municipal water
Outputs	
Rated power output (AC)	100 kW
Electrical efficiency (LHV net/AC)	> 50%
Electrical connection	480V @ 60 Hz, 4-wire 3 phase
Physical	
Weight	10 tons
Size	224" x 84" x 81"
Emissions	
NOx	< 0.07 lbs/MW-hr
SOx	negligible
CO	< 0.10 lbs/MW-hr
VOCs	< 0.02 lbs/MW-hr
CO ₂ @ specified efficiency	773 lbs/MW-hr on natural gas, carbon neutral on Directed Biogas
Environment	
Standard temperature range	0° to 40° C (extreme weather kit available)
Max altitude at rated power	6,000 ft. MSL
Humidity	20% - 95%
Seismic Vibration	IBC 2003: Site Class D
Location	Outdoor
Noise @ rated power	< 70 DB @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
Product Listed by Underwriters Laboratories Inc. (UL) to ANSI/CSA America FC 1	
Additional Notes	
Operates in a grid parallel configuration	
Includes a secure website for you to showcase performance & environmental benefits	
Remotely managed and monitored by Bloom Energy	
Capable of emergency stop based on input from your facility	



Bloom Energy Corporation
1252 Orleans Drive
Sunnyvale CA 94089
T 408 543 1500
www.bloomenergy.com

Bloomenergy™

Hazardous Materials Summary

A sulfur removal system is included with the ES-5700. De-sulfurization beds are installed within the system's central Input/Output Module, and are used to remove sulfur from the natural gas before it enters the fuel cell system.

The catalyst is contained in removable steel canisters, which are fully enclosed by the locked/alarmed fuel cell system paneling. The gas passes through at ambient temperature.

The catalyst included in the de-sulfurization beds includes the following (MSDS sheets attached):

- DP45
- Catalyst F8-01

Similar to a printer cartridge, the canisters are not considered hazardous until they are opened. When the catalyst is spent, the sealed canisters are removed from the fuel cell system and transported on a bill of lading to Bloom Energy's warehouse facility by a qualified third party. There, the canisters are serviced under the EPA ID for that location. The service consists of removing the tops, vacuuming out the contents into a 55 gallon drum as NON RCRA hazardous waste*. The waste is then manifested on a Uniform Hazardous Waste Manifest and sent to a hazardous waste disposal facility.

*The waste is profiled as Non-RCRA, and carries a California Waste Code 181:

- Molybdenum Oxide 40-50%
- Tungsten Disulfide 40-50%
- Copper Oxide 5-10%
- Charcoal 5-10%



Ronald V. Ronconi, aia
Anthony F. Matisi, aia
José Cotto, aia

October 20, 2010

Job No. 2010_113 AA

City of Sunnyvale
Community Development
456 W. Olive Ave.
Sunnyvale, CA 94086

Associates:
Richard A. Smith, aia
Michele A. Chadwick, iida
Gary J. Aquilina, aia

Re: **Bloomenergy Fuel Cell Display – 1252 Orleans Drive
Description Letter for Variance Application**

To Whom It May Concern:

On behalf of Bloomenergy, CAS Architects is submitting this letter of description as part of the requirements for a Variance application.

Bloomenergy has developed and designed a fuel cell system with a high-level of aesthetic treatment. The finished modules appear more akin to a well-designed monument signage. They are less than 7' in height and have been designed to be compatible with the aesthetics of building facades and surrounding green landscaping.

For their headquarters in Sunnyvale, Bloomenergy is proposing to place a fuel cell system in an area of display at the front of their building so that customers and visitors can see first-hand how this new design and new approach to the placement for this type of equipment allows more flexibility for location on any given site.

Bloomenergy is requesting a variance from section 19.48.100 of the ordinance because they feel that the ordinance unfairly groups this product's placement and screening requirements with generic mechanical equipment. The intent of the ordinance was to address the general characteristics associated with mechanical equipment as being unsightly due to their rough industrial appearance and their incompatibility with a building's scale and architecture and would conflict with the surround landscape.

However, the module has been designed to specifically address the company's goal to have this design work in harmony with an adjacent building and surround landscape. The units have been scaled and given detailing that make it compatible with elements found on building facades, such as metal panels, canopies, storefront fenestration, etc.

Please do not hesitate to call me if you have any questions. I can be reached at 650-428-2506.

Very truly yours,

CAS Architects, Inc.

A handwritten signature in black ink, appearing to read 'José Cotto', written over a white background.

José Cotto, AIA
Principal

CAS Architects Inc.
1023 N. Shoreline Boulevard
Mountain View
California 94043-1838
Tel. 650.967.6606
Fax 650.967.6616
www.casarch.com



VARIANCE JUSTIFICATIONS

All three of the following findings must be made in order to approve a Variance application.

The Sunnyvale Municipal code states that all three of the following justifications must be met before granting the Variance. Please provide us information on how your project meets all of the following criteria.

1. Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape, topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district.

The objective of the project is to have the fuel cell units function as a working display for visitors and customers. Other areas on the site such as the rear of the building are currently occupied by service yard enclosures and loading docks that have mechanical equipment serving the manufacturing operations in the building. Parking might also be impacted if another location was required. There is also the close proximity to natural gas, water and electricity feeds that are nearby the proposed location. Ultimately, the proposed lawn area does in fact offer the best location for meeting the project's objective.

AND

2. The granting of the Variance will not be materially detrimental to the public welfare or injurious to the property, improvements, or uses within the immediate vicinity and within the same zoning district.

As being similar to the design quality of signage monuments, the aesthetics of the fuel cell system does not adversely affect the overall appearance of the property including the existing building and surrounding landscaping. The overall scale of the proposed configuration works with the scale of the surrounding trees, plants, berms and walkways. The finish quality and detailing of the design is also compatible with elements found in architecture such as metal panels, store-front fenestration, awnings, etc.

AND

3. Upon granting of the Variance, the intent and purpose of the ordinance will still be served and the recipient of the Variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.

As the intent of the ordinance is to provide guidelines for locating and screening equipment generally characterized as "unsightly" and "inappropriate" and "out of scale" for exposure to the street, granting this variance does not in any way prevent continued enforcement of the ordinance for those equipment of which it was intended to address. Any other property owner seeking a similar variance would have to present equipment that had been given the same high-level design treatment as Bloomenergy's product.

If you need assistance in answering any of these justifications, contact the Planning Division staff at the One-Stop Permit Center.