

# Potrero Hills Energy Producers - Landfill Gas to Energy Plant Data Gap Analysis for CEQA and Permitting

## 1.0 Introduction

ARCADIS has prepared this data gap analysis for the proposed Potrero Hills Energy Producers (PHEP) Landfill Gas to Energy (LFGE) power plant project to assess what information is available and analyses may need to be completed should this project move forward with or without implementation of the Potrero Hills Landfill (PHLF) Phase II Expansion project. This data gap analysis was prepared based on consideration of the current PHEP LFGE project description, as well as the draft and final environmental impact reports (EIRs) (EDAW 2003, 2005, 2007 and 2009) and associated supporting documents for the PHLF Phase II Expansion. The result of this analysis will be used to determine the scope of the initial study and identify any additional field work or analyses that may be necessary to complete the CEQA review for the project.

In reviewing the PHLF Phase II Expansion draft EIR (DEIR) and final EIR (FEIR) documents, the originally proposed LFGE plant location was described as being situated on the north ridge line of the PHLF Phase II expansion area. An alternate LFGE plant location was described as being located near the existing landfill gas (LFG) flare in the Phase 1 landfill area. This alternate location has been selected as the preferred and proposed location of the PHEP LFGE plant, and this location forms the basis of this gap analysis.

The gap analysis summaries provided below do not include Recreation and Population/Housing, since these two CEQA resource sections were not covered in any detail within the PHLF Phase II expansion EIR documents. However, discussion of Recreation and Population/Housing would be included in the Initial Study.

A tabular summary identifying the gap analysis issues, action items and regulatory permits/plans associated with each CEQA resource section are provided for ease of reference as Table 1.

## 2.0 Data Gap Analysis

### 2.1 *Aesthetics (Visual Resources)*

This resource category considers project features that may affect the quality of the views from local lines of sight.

#### Existing Conditions

The proposed PHEP LFGE plant location is in a low lying portion of the existing Phase 1 landfill area. The site is surrounded by rolling hills covered with non-native California grasslands. The lines of site are from:

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- The Lawler Ranch Development approximately 1 mile to the northwest,
- The Rush Ranch Nature Center approximately 1 mile to the west, and
- State Route 12 located to the north.

### Potential Issues

- The PHEP LFGE plant location near the existing flare is not readily visible from surrounding view points because it is situated in a low point of the Phase I PHLF area with a base elevation of approximately 60 feet above mean sea level (msl). In the current draft of the project description, the LFGE power plant stacks are projected to be 30 feet in height, which may reach an elevation that is visible from Rush Ranch, Lawler Ranch or Route 12.
- The project will require the installation of electrical lines to connect the PHEP LFGE plant with the PG&E power lines to the east of the site. Above ground power poles located along the ridge north of the landfill would be visible from Route 12 and potentially from residential areas in Suisun and Fairfield to the northwest.

### Existing Information

- The site of the proposed PHEP LFGE plant is located at an elevation of approximately 60 feet above msl.
- The current north ridge maximum elevation is 220 feet msl and the south ridge line reaches peak elevations of 370 feet and 420 feet above msl.
- The Phase II landfill maximum elevation would be 345 above msl and would be located east of the PHEP LFGE plant.

### Data Gaps and Recommended Action Items

- Develop line of sight profiles from Rush Ranch, Lawler Ranch and Route 12 for the stacks and power poles (assuming above ground installation).
- Evaluate aesthetic impacts associated with potential power line routing along the north ridge.
- ALUC review will not be required because stacks are less than 100 feet.

## **2.2 Agricultural Resources**

This resource category examines the agricultural resources present in the project area that may affect or be affected by the proposed project.

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### Existing Conditions

The Potrero Hills are zoned for agricultural use (AL 160) on 160-acre parcels (EDAW 2003). The majority of the Potrero Hills upland is used for cattle grazing. The PHEP LFG plant location would be near the existing LFG flare in the Phase 1 area on land that has been out of agricultural production since the landfill operation was initiated.

### Potential Issues

- Construction of the new power lines along the north ridge line would temporarily disturb upland grassland suitable for cattle grazing.

### Data Gaps and Recommended Action Items

- No action items are recommended.

## **2.3 Air Quality Resources**

This resource category considers project features that may affect air quality, including release of criteria and toxic air pollutants. The impacts are assessed through comparison to Bay Area Air Quality Management District (BAAQMD) thresholds of significance, which are primarily quantitative.

### Existing Conditions

Although landfill gas is currently flared onsite, based on original discussions with BAAQMD, baseline emissions from the proposed project are to be assumed to be zero. Emissions from a potential LFG power facility were calculated in the 2003 DEIR; however, in the Recirculated DEIR (EDAW 2007), the Energy Recovery emissions were identified as zero for baseline and project emissions. The justification provided in the Recirculated DEIR for removal of Energy Recovery emissions is stated as follows: "Potrero Hills has no energy recovery system in place; therefore emissions from this source that were included in the EIR were removed from the revised emission totals. The flare emissions which were omitted in the EIR have been added to the revised emission totals. A new flare was proposed in the 2004 BAAQMD application and is included in the Revised Expansion calculations." This explains why the flares are included in the baseline emissions, but does not explain why the energy recovery operations would be excluded from the Project emissions. In addition, the Recirculated DEIR (EDAW 2007) states (without quantitative reasoning): "The emissions generated from energy recovery operations would be expected to be equal to or less than the calculated emissions from the flares identified in Table 4.9-1 when considering the offsetting utility emissions."

### Potential Issues

- Determining what the BAAQMD will consider as "baseline" conditions for greenhouse gas

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(GHG) emissions.

- Identifying mitigation measures/control devices to reduce emissions to less than significant (LTS) levels.
- Odors associated with the technology – Although unlikely an issue, discussion will need to be included.
- Cumulative impacts – Because the Bay Area Air Basin is already non-compliant for multiple pollutants, the additive pollution from the PHEP LFGE plant may be considered cumulatively significant.
- Toxic Air Contaminants, such as formaldehyde, will likely require a Health Risk Assessment (HRA) to ensure the safety of on-site and off-site receptors, and the region as a whole. Initial air modeling has been completed for installation of all 6 engines.
- The approach for assessing construction emissions for engines 4-6 (i.e., 1 every 3 years) has not been determined.
- The approach for including discussion of emissions calculations and air modeling for initial (engines 1-3) and incremental installation of additional engines (4-6) will need to be clarified with BAAQMD.

### Existing Information

- Setting is currently well described in the 2003 and 2007 DEIRs. Updates will be needed, but this will serve as a good base.
- Baseline for criteria and TAC emissions will be zero – PHEP LFGE project is considered by BAAQMD as a co-located, but separate emissions source, from PHLF.

### Data Gaps and Recommended Action Items

- Work with BAAQMD to identify what will be accepted as GHG baseline conditions.
- Use the IS as an opportunity to fully identify baseline conditions and compare to proposed project emissions.
- Build mitigation measures into the project description to minimize air impacts.
- Work with BAAQMD to determine whether the construction emissions for engines 4-6 will need to be added to operational emissions since they will occur after the first 3 engines are operational, or if there will be multiple estimates for construction and operational emissions.

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### 2.4 *Biological Resources*

This resource category considers the wildlife and botanical resources that are potentially associated with the project site or could be affected by the project.

#### Existing Conditions

The Potrero Hills are in an uplifted area of marine sedimentary deposits that form an upland bordered on three sides by the Suisun Marsh. The undeveloped portions of the hills are primarily non-native grassland habitat. Aquatic features in the hills are limited to Spring Branch Creek and other intermittent drainages that provide a small amount of riparian habitat, and agricultural ponds established to support cattle grazing. There are also three sedimentation basins located in the western Phase I area that area associated with the existing Phase 1 operations. Two of these sedimentation basins are within 300 feet of the proposed PHEP LFGE plant location.

Extensive biological resource surveys and evaluations were conducted in the Phase II expansion area to support the DEIR (EDAW 2003; BCDC 2007). However, very little work, if any, was conducted in the Phase I area at that time. The proposed PHEP LFGE plant site is located in a highly disturbed portion of the Phase 1 area, so habitat resources are limited or non-existent.

The DEIR (EDAW, 2003) and the BCDC Scientific Panel Review (2007) indicate the Phase II expansion area has the potential to contain 13 special-status plants and 21 special-status wildlife species that are known or have potential to occur in the area. Wildlife species of note known to be present in the Phase II expansion area include California tiger salamander (*Ambystoma californiense*) and burrowing owl (*Athene cunicularia*) (EDAW, 2003; BCDC 2007). California tiger salamander is a listed as threatened under both the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). Burrowing owl is a federal and state species of special concern and is protected under the Migratory Bird Treaty Act (MBTA). Surveys for California red-legged frog, a federally listed threatened species and state species of special concern were negative. A variety of invertebrate species associated with vernal pool habitats have the potential to occur in the Phase II expansion area. One crustacean, the California linderiella (*Linderiella occidentalis*) is known to occur in the vernal pools and wetlands in the Phase II expansion area (EDAW, 2003).

#### Potential Issues

- Power line installation along the north ridge could temporarily disturb California tiger salamander upland habitat, burrowing owl and an area supporting native plants.
- Data regarding special-status plants and wildlife are not available for the proposed PHEP LFGE plant location.

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- California Tiger Salamander (CTS) habitat mitigation is provided for in the Phase II PHLF expansion Mitigation and Monitoring Plan, Appendix A, Volume 1 of the Final EIR (EDAW, 2005). However, it is unclear how mitigation would be provided or managed if the PHEP LFGE plant was constructed and the Phase II expansion did not occur.
- The sedimentation basin west of the proposed PHEP LFGE plant site could potentially be affected by leachate from the power plant septic system if the system is improperly placed. This has the potential to result in nutrient loading to the basin.
- The mitigation measures specified in the Final EIR Mitigation and Monitoring Plan (EDAW, 2005) more or may not be applicable to construction actions associated with the proposed PHEP LFGE plant construction and power line installation. The status of these mitigation measures will need to be evaluated if the LFGE power plant is constructed, but the PHLF Phase II Expansion is delayed or canceled.

### Existing Information

- No current ecological data were found for the power line construction pathways or for the wildlife associated with sedimentation basins located near the proposed PHEP LFGE plant site.
- The power plant site is expected to have a construction footprint of approximately 4 acres.

### Data Gaps and Recommended Action Items

- Potential routes for the power line installation should be identified to assess whether CTS or other special-status upland habitat or wetland habitat would be disturbed during construction.
- Compliance with the applicable impact avoidance, minimization and mitigation measures specified in the Phase II Draft and Final EIR should be evaluated.

## **2.4 Cultural Resources.**

This resource category addresses the potential for cultural prehistoric or historic resources to be present in the project area.

### Existing Conditions

Cultural and historical resource surveys performed for the Phase I and Phase II landfill projects were negative for prehistoric and historic cultural resources (EDAW 2003, 2005). The proposed PHEP LFGE plant will be constructed within the Phase 1 Landfill area near the existing landfill gas flare in an area

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that has already been substantially disturbed.

### Potential Issues

No potential issues have been identified for construction or operation of the proposed PHEP LFGE plant.

### Existing Information

No cultural resources have been identified on site to date (EDAW 2003 and 2005).

### Data Gaps and Recommended Action Items

The project will need to prepare a plan to identify appropriate responses should Native American remains or burial goods be found on the site during construction. Preparation of a Native American Burial Protection Plan is required by Section 106 of the National Historical Preservation Act and the State Health and Safety Code Section 7050.5.

## ***2.5 Earth Resources/Mineral Resources***

This resource category examines the characteristics of the soil, rock or other mineral resources present in the area that may affect or be affected by the proposed project. In addition, the seismic conditions in the region and the potential for impacts to the proposed project are considered.

### Existing Conditions

The shallow soils and bedrock associated with the Potrero Hills is fully characterized in the Phase II Expansion DEIR. The proposed PHEP LFGE will be constructed in the Phase I project area at a location that has been significantly disturbed in the past. Below ground installation of power lines and potentially poles or towers for above ground power lines could occur along the north ridge line of the Phase I and II Landfill areas. Construction along the northern ridge may encounter steep slopes and shallow soils prone to slumping and erosion. Underlying clay soils and shale and claystone bedrock are considered impermeable and provide hydraulic separation from the groundwater bearing sediments in the Suisun Marsh area (EDAW, 2003).

The landfill was developed on an old quarry and a remnant of that quarry exists in the north portion of the Phase 1 area. There are no known valuable mineral resources on the site.

A regional and site seismicity analysis prepared for the Phase II DEIR indicates that the PHLF is located within 6 to 43 miles of 6 fault zones that have the potential to generate a 6.0 or higher magnitude maximum credible earthquake. The maximum probable earthquake magnitudes at the site for these faults range from 0.080 to 0.33 (EDAW, 2003).

### Potential Issues

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- Construction of the new power lines along the north ridge line will occur on steep slopes in areas with erodible soils.
- The proposed PHEP LFGE plant is likely to experience seismic action during the project duration.
- Shallow soils and impermeable bedrock and clay may result in difficulties for the proper placement and function of a leach field at the proposed PHEP LFGE plant.

### Data Gaps and Recommended Action Items

- Temporary disturbance of erodible soils and steep slopes during installation of the new power lines (either below or above ground) can be appropriately addressed through effective implementation of best management practices (BMPs) and avoidance of steep slopes where feasible. Develop BMPs and evaluate slopes and soil conditions for power line routing alternatives.
- Ensure that the seismic requirements for the PHEP LFGE power plant are met in the power plant and power line design.
- Review soil and bedrock conditions (i.e., type, depth and condition) in the immediate vicinity of the PHEP LFGE plant to evaluate the proper placement and function of the septic system and leach field.

## **2.6 ENERGY**

This resource category considers project features that may affect energy usage.

### Existing Conditions

Potrero Hills Landfill is not currently served by the PG&E power grid. The landfill uses on-site diesel generators to produce the electricity for meeting on-site demands, such as exterior lighting, office needs, equipment maintenance building needs, site security, water pumps, landfill gas extraction, leachate control and flare). An on-site underground electrical grid distributes power from the generators to each point of use. The on-site generators produce a combined 20-25 kW per day of electricity and are located at the existing flare.

### Potential Issues

- The proposed project would require the installation of new and modification of existing electrical lines to connect the proposed PHEP LFGE plant with the PG&E power lines to the east of the site. Interconnection details are not yet fully defined.



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- The construction of the PHEP LFGE plant would require temporary disruption of electrical service from upsizing existing PG&E power lines.

### Existing Information

- Energy is not covered as a separate resource section in the PHLF Expansion EIR documents, but is discussed in the PHLF Expansion Draft EIR, Chapter 4.5, under Utilities and Public Services (EDAW 2003). No significant environmental impacts from energy were identified in the Draft EIR.
- The LFGE plant is described programmatically in the Draft EIR as a landfill gas-fired power plant that would ultimately produce up to 10 megawatts (MW) of electricity. This component of PHLF expansion entails adding engines or turbines as the landfill gas quantity increases. The power plant would occupy approximately 3.5 acres.
- The location of the proposed PHEP LFGE plant would be near the existing gas flare and would require the extension of a high capacity power line across the length of the site to connect with the existing PG&E power line. The power line alignment would generally follow along the ridgeline of the northern property line. The existing PG&E line is not of sufficient voltage or current-carrying capacity to transmit the expected amount of electrical power that would be created from the conversion of landfill gas.
- The LFGE plant would convert landfill gas that is currently flared to electricity, thereby displacing non-renewable fossil fuel electrical generation, resulting in a net reduction in future criteria pollutant and greenhouse gas emissions from non-renewable projects. Electricity not consumed to meet on-site demands would be sold into the California Independent System Operator (CAISO) system as a renewable energy source. Per the Draft EIR, at maximum capacity of 10 MW, LFGE plant could meet the electrical power demands of approximately 30,000 homes.
- BCDC Exhibit Y – New Electric Lines, in “Staff Summary for Appeal No. 1-05; Modifications to Marsh Development Permit No. MD 88-09 issued to Potrero Hills Landfill, Inc., for Phase I Landfill Expansion Project” dated 6/3/10, depicts power line routing.

### Data Gaps and Recommended Action Items

- Identify proposed project’s energy consumption requirements in IS.
- Develop power line interconnection details for use in IS and SEIR.
- Evaluate the extent of potential disruption to electrical service caused by upsizing PG&E lines in IS.

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- Determine occupancy classification of the proposed project. It would likely be Type U classification (Utility and Miscellaneous Buildings and Structures, not otherwise classified). Evaluate applicability of Building Energy Efficiency Standards, to be included as part of for Building Permit application.
- Reference Aesthetics Section 2.1 regarding potential visual impacts from engine stacks and power line routing/configuration.

### ***2.7 HAZARDS AND HAZARDOUS MATERIALS***

This resource category considers project features that may create hazards for the public, environment and surrounding land uses.

#### Existing Conditions

No description of existing conditions with respect to Hazards and Hazardous Materials was provided in any of the PHLF Expansion EIR documents.

#### Potential Issues

- Potential for chemical exposure from LFGE plant operations (e.g., exposure to toxins from LFGE plant air emissions, such as formaldehyde, and potential for release of oil) not adequately addressed, as indicated by a comment in the Final EIR (See Existing Information below).
- Hazards created by the project for the public, environment and surrounding land uses potentially include, but are not limited to:
  - Transport, storage, use or disposal of hazardous materials – potential impact from LFG power plant construction and/or operation
  - Emissions or potential release of hazardous substances – potential impact from the LFG operations
  -

#### Existing Information

- Hazards and Hazardous Materials were not addressed in the PHLF expansion DEIR. However, response to Comment 9-49 in FEIR document (EDAW 2005) regarding potential for chemical exposure indicated that no chemicals would be used in the electricity generation facility, other than normal maintenance products.
- The current draft PHEP LFGE power plant project description identifies hazardous materials to

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be used in support of LFGE plant operations and maintenance. Hazardous materials primarily consist of new and used oils to be stored in 1000-gallon aboveground storage tanks. Please see the project description for more complete description of hazardous materials, including hazardous waste, storage and use.

- Air permit application will include health risk assessment and refined air toxics modeling, which could be pulled into the IS. See Air Quality Section 2.3.
- The proposed plant site is appears to be located in Zone C of the ALUC TAFB Land Use Compatibility Plan less than 50 meters south of the estimated boundary of Zone B2 of the ALUC TAFB (ALUC, 2002). Zone B2 has restrictions on the construction of structures more than 100 feet and the use of aboveground storage tanks > 1,000 gallons.

### Data Gaps and Recommended Action Items

- Address hazards and hazardous materials from the PHEP LFGE plant in the IS, and develop appropriate mitigation measures (e.g., secondary containment, overhead coverage) to reduce impacts to less than significant.
- Confirm of the position of the Zone B2 boundary on the Potrero Hills Landfill site and location of the LFGE plant in Zone C or Zone B2.
  - Determine whether or not oil and waste oil are considered “hazardous materials” subject to volume restrictions under the ALUC TAFB Land Use Compatibility Plan.
- Reference Land Use Section 2.9 for additional information regarding the airport land use plan and airstrip.
- Reference Air Quality Section 2.3 for discussion of potential exposures from LFGE plant emissions.

## ***2.8 Hydrology and Water Quality***

This resource category examines the characteristics of the water resources associated with the site that could be affected by the proposed project.

### Existing Conditions

The Phase 1 area covers much of the upper reaches of ephemeral Spring Branch Creek that flows to the southwest and Suisun Marsh, and an unnamed drainage that flow west and then north to Hill Slough. Both drainages contain stock ponds downgradient of the landfill prior to their confluence with Suisun Marsh. The western edge of the Phase 1 area is approximately 0.5 miles from Hills Slough and 1 mile from Montezuma Slough.

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Surface runoff from the Phase 1 area in the vicinity of the proposed PHEP LFGE plant site enters Silt Basin #1 immediately to the west. Surface runoff then flows downgradient via the westerly unnamed drainage. There are two silt basins upgradient and slightly north of the LFGE power plant location, the Recycling Area Silt Basin and the Northwest Landfill Runoff Pond.

Groundwater beneath the site is reported to be isolated in a sandstone formation and is of relatively poor quality (EDAW 2003).

Shallow groundwater beneath the Phase 1 area appears to occur within 10 to 20 feet of the ground surface in the vicinity of the proposed PHEP LFGE plant location (EDAW 2003). This area is bracketed by two leachate monitoring wells (i.e., GW-4 and GW-10).

### Potential Issues

- A construction SWPPP will need to be prepared to protect water quality conditions during construction, including a risk assessment for site related chemicals
- The PHEP LFGE plant will need to have an industrial storm water pollution prevention plan (SWPPP) or operate under the PHLF industrial SWPPP.
- Performance of the proposed septic tank and potential leach field system may be affected by the impermeable clay soil, shale and claystone bedrock found in the vicinity. Discharge from a potential leach field could cause nutrient loading to Silt Basin #1.

### Existing Information

- The proposed PHEP LFGE plant site is located in a significantly disturbed area that does not appear to have any sensitive hydrologic features.

### Data Gaps and Recommended Action Items

- Evaluate groundwater depth, flow and water quality conditions near the power plant location to properly assess the placement of the septic tank and leach field to minimize the potential for nutrient loading the Silt Basin #1 and interference with the groundwater/landfill leachate monitoring program.
- Develop SWPPPs for the construction and industrial operation phases of the LFG power plant

## **2.9 Land Use**

This resource category considers the proposed project's land use implications, and considers conformance with existing land use and zoning regulations.

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### Existing Conditions

The proposed project is located within the existing PHLF site in the Spring Branch Creek Valley, bordered by hills and the Suisun Marsh (west). The landfill is within an area zoned by Solano County as Limited Agricultural District.

Three residences are located on agricultural land north of the existing landfill. The landfill is located within the Secondary Management Area (Suisun Marsh Preservation Act and Suisun Protection Plan). The Suisun Marsh Local Protection Program requires Solano County to develop a Local Protection Program (LPP) for the marsh by administering Marsh Development Permits (MDP). The Phase II Landfill Expansion is authorized by MDP 88-09 issued by Solano County.

### Potential Issues

- At the time of the DEIR, new power lines were to be placed at least 0.5 miles from the Marsh. A significant impact was identified from the installation of (above ground) electrical lines. Aboveground utilities are not consistent with Policy 1(c) of the LPP.
- Safety problems were identified with undergrounding: “A potential hazard associated with undergrounding a high capacity line is the possibility of landfill gas leaking from the adjacent landfill into the below-ground power line conduit or utility boxes. This would be a safety hazard for maintenance personnel and could be an explosive hazard.” Aboveground provides hazard to biological resources.

### Existing Information

- Underground installation was found to be less than significant.
- The DEIR found that interconnection would not conflict with Policy 1(c) of the LPP because it involves replacement of an existing line, not construction of a new line.
- The project is thought to be located in *Compatibility Zone C* in the TAFB Land Use Compatibility Plan (ALUC 2002). However, the proposed LFGE Plant site is located very close to the estimated boundary for Zone B2, which is comparable to Accident Potential Zone II (APZ II) as indicated in Air Force guidelines, but is expanded to encompass approach and departure flight tracks that are not aligned with the runway. Potential compatibility conflicts associated with construction of the LFGE plant in Zone B2 include the use of aboveground storage tanks for oil and waste oil, and potential exposure to construction workers and plant operators to noise levels in the 70-to-80-dB CNEL range.

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### Data Gaps and Recommended Action Items

- Land use concerns are highly focused on the utility lines, and therefore specific information on the anticipated utilities is necessary to identify land use issues.
- Evaluate potential conflicts with the TAFB Land Use Compatibility Plan and prepare materials appropriate for ALUC review of the following:
  - Confirmation of the LFGE plant site within Zone C or Zone B2.
  - Storage of over 2,000 gallons of hazardous materials is prohibited in Zone B2. Storage must be within underground storage tanks (USTs). The project description currently calls for two aboveground storage tanks, one thousand gallons each for oil and waste oil, respectively.
  - Potential hazards to flights (i.e., tall objects) associated with any new aboveground power lines.

### **2.10 Noise**

This resource category considers the potential sources of noise associated with the proposed project. Thresholds of significance are generally those identified in the County General Plan. Solano County noise limits for industrial/commercial/public utility land use is 50 dBA Community Noise Equivalent Level (CNEL) measured at the boundary of the nearest residential zone, or 60 dBA CNEL measured at the boundary of the nearest commercial, business, or noise-sensitive industrial zone. Transportation noise is limited to 60 dBA CNEL outdoors and 45 dB CNEL indoors.

### Existing Conditions

Ambient noise in the area is generally associated with landfill operations, aircraft (Travis AFB), trucks (landfill) and the traffic on SR 12. 24-hour ambient noise levels were measured at two locations at the landfill in 2002 – the Day-Night Average Noise Levels ( $L_{dn}$ ) were 66.6 and 68.4 dB.

### Potential Issues

- Noise levels associated with the power plant equipment (engines, radiators and gas skid) may exceed 50 dBA CNEL limit for nearby residences.
- The Solano County General Plan states that <75 CNEL dBA is normally acceptable for industrial, manufacturing, utilities and agriculture uses. 70-80 CNEL is considered conditionally acceptable, meaning: “New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed

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windows and fresh air supply systems or air conditioning will normally suffice.” Therefore, a detailed study would likely be required (see Table HS-2).

### Existing Information

- The Draft EIR (EDAW 2003) concluded noise for the proposed power plant site located in the PHLF Phase II expansion area would be less than significant at the nearest residential zone boundary. This location is in closer proximity to the nearest residence than the proposed PHEP LFGE plant location adjacent to the LFG flare.
- The Draft EIR notes that the north ridge line would provide a sound barrier to increased landfill operation noise (EDAW 2003). The hills would be expected to also provide noise attenuation for the LFG power plant at the alternate plan location.
- The estimated noise levels of equipment operated at the LFGE plant (prior to mitigation) would be:
  - For the engines, there are no published noise data. However, the engines would be contained within a building and exhaust silencers would be installed on the engines with a noise level that is less than or equal to 65 dBA (for each silencer).
  - For the radiators, approximately 65 dBA at 25 feet (for each radiator).
  - For the gas skid, approximately 85 dBA at 50 feet.

### Data Gaps and Recommended Action Items

- Identify the cumulative noise impact to residences from the proposed project during the following conditions: (a) initial construction period (b) initial operation period (c) combined operation and construction of engines 4-6.

## **2.11 Public Services**

This resource category addresses whether the proposed project would interfere with maintaining acceptable service ratios, response times, or other performance objectives for public services (police, fire, schools, parks, etc).

### Existing Conditions

The landfill currently collects and flares landfill gas, preventing gas buildup or migration. Fire protection measures and clearance zones are required by the District for the landfill. These include a water supply and a minimum 30-foot wide firebreak with adequate access, approved by the District, to be provided for fire protection around the working area of the landfill. A firebreak is maintained around the Public

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Unloading Area and all other operating areas. Cattle grazing outside the fenced active use area limits vegetation fire hazards in these areas.

Water hoses are installed at locations near the entrance area, including at the existing well, at the business office and the employee break room, and at the equipment wash pad at the south end of the maintenance shop (2003).

### Potential Issues

- Fire hazard associated with the proposed PHEP LFGE power generation facility could increase risk of fire or explosion.

### Existing Information

- The proposed project would not increase the quantity of LFG produced at the site, nor would it require storage of the gas.

### Data Gaps and Recommended Action Items

- Fire prevention is to be addressed in the IS. Although non-fire public services were not addressed in the DEIR, they likely can be fully described and found to be less than significant in IS.

## **2.12 Traffic**

This resource category addresses the impact that the project would have on surrounding freeways and roadways.

### Existing Conditions

Existing streets and highways serving the PHLF area are shown on Exhibit 4.8-1 of the DEIR (EDAW 2003). The landfill is accessed from State Route 12 (SR 12 / Rio Vista Road) via Scally Road, Kildeer Road, and Potrero Hills Lane. These access roads are two-lane, paved, all-weather roads that, based on standard traffic engineering criteria, are of sufficient width to allow safe passage of large trucks.

### Potential Issues

The project is expected to generate approximately 200 heavy duty truck trips during the 12 month initial construction period (for engines 1, 2, and 3). The subsequent construction period (installation of engine 4) is expected to generate approximately 100 truck trips over a three month period for each additional engine. Individual construction crew vehicle trips to the site are estimated to peak at 25 trips per day during the construction period, and employee vehicle trips to the site during operations are expected to average 2 trips per day.

- Construction deliveries could contribute to congestion on State Route 12 and the landfill



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entrance road during morning and evening commute hours and peak landfill delivery periods

- Construction crew traffic could contribute to traffic congestion on State Route 12 during commute hours and will require on-site parking

### Existing Information

- In the 2003 DEIR, existing conditions were fully described.

### Data Gaps and Recommended Action Items

- The DEIR did not address traffic associated with the construction of the proposed PHEP LFGE plant project. This should be characterized relative to current and projected truck and vehicle traffic to the landfill in the IS.

## ***2.13 UTILITIES AND SERVICE SYSTEMS***

This resource category considers project features that may affect utilities and service systems.

### Existing Conditions

- There is no piped municipal water or sewer service available for PHLF, due to its remote location. Bottled drinking water is brought to the PHLF site for personnel use. Rainwater that is collected in on-site retention ponds (also referred to as silt basins), or reclaimed wastewater brought in by truck from a local water treatment plant, is used for dust suppression. There is low-volume water well on-site that is used as a non-potable water source. On-site sewer lines from toilets at the landfill office building, scale house, and employee break room discharge to a septic tank and wastewater disposal field.
- As a Class III solid waste landfill, PHLF currently accepts wastes from various communities and transfer facilities located throughout northern California, such as the Sierra foothill counties and Alameda, Contra Costa, Marin, Mendocino, Napa, Sacramento, Santa Clara, San Mateo, Solano, and Yolo counties. PHLF also provides waste disposal services for solid waste generated by site operation and maintenance activities.

### Potential Issues

- Utilities and service systems for the PHEP LFGE plant were not identified in the PHLF EIR documents, with the exception of energy (electricity). Reference Energy section for additional information.

### Existing Information

- No significant utilities impacts were identified in PHLF Expansion DEIR (EDAW 2003).

## **Potrero Hills Energy Producers - Landfill Gas to Energy Plant Data Gap Analysis for CEQA and Permitting**

- Per the current draft PHEP LFGE plant project description, 1-2 employees would be hired to ensure proper operation and maintenance of the LFGE plant. These employees would normally work Monday through Friday, from 8 am to 5 pm. Potable drinking water (in the form of bottled water) and a restroom facility (consisting of a chemical toilet with holding tank for pump out or a septic tank and leach field) would be provided for these employees. Other potential sources of wastewater would be rinsed from cleaning the floors and condensate from the air compressor(s). These industrial wastewater discharges would be collected, stored and characterized for appropriate disposal.

### Data Gaps and Recommended Action Items

- Address utilities and service systems in IS, including water supply, wastewater, and solid waste disposal.
- Identify anticipated construction-generated waste streams and methods of disposition.

# Potrero Hills Energy Producers - Landfill Gas to Energy Plant Data Gap Analysis for CEQA and Permitting

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