

Permit Guidance  
For  
Anaerobic Digesters  
And  
Co-Digesters

California Environmental Protection Agency

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VERSION 2

This guidance manual has been compiled and partially written by Robert Crandall who works for the Central Valley Regional Water Control Board. Mr. Crandall originally began work on this manual while on assignment to the California Environmental Protection Agency and continued it through his employment with the Central Valley Water Board.

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California Department of Resources Recycling and Recovery  
California Energy Commission  
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County Of Fresno  
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Sacramento Municipal Utility District  
San Diego Gas & Electric  
San Joaquin Air Quality Management District  
Sempra Utilities  
Southern California Edison  
University of California, Davis  
Western Dairyman's Association

Individuals who made major contributions to this manual are acknowledged in following pages.

## ABSTRACT

The *Permit Guidance Manual for Anaerobic Digestion Projects* provides the basic California permitting framework and requirements for developers of anaerobic digestion projects seeking to convert biomass feedstocks to the production of energy. The manual outlines the steps required to secure the various regulatory permits, identifies the contacts for each relevant regulatory agency, provides estimates of costs and time to complete the process, and references key technical guidance documents and samples of completed applications/permits. The manual was developed in response to an interest by all stakeholders to attempt to compile in one document the major permitting factors for anaerobic digestion projects in California. This manual reflects the current status of the permitting framework and requirements at the time of publication and will be updated as process and technical improvements occur or as information changes.

**Keywords:** anaerobic digestion, biomass, biomethanation, biogas, biofuels, dairy manure feedstocks, animal waste feedstocks, permits, permitting, permitting requirements, regulatory framework, co-digestion, electricity production, California, California Department of Resources, Recycling and Recovery Board permitting requirements, State Water Resources Control Board permitting requirements, San Joaquin Valley Air District permitting requirements.

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No photo available.

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## Preface

This guidance manual is designed to cover a range of anaerobic digestion applications. However, the use of anaerobic digestion in the application of dairy wastes has started to gain extensive interest in recent years. The pattern of growth and interest in this application is interesting and instructive for all applications of anaerobic digestion.

### History of Anaerobic Digesters at Dairies in California

Prior to 2002, fewer than five dairies in California operated anaerobic manure digesters. Each dairy used the biogas produced by the digester to run an engine that powered a generator producing electricity for use at the dairy. There were no specific regulatory programs that applied to the digesters, although the Regional Water Boards (RWBs) regulated wastes produced at the dairies, including effluent from the digesters. Other state and local agencies likewise did not have regulations specific for the digesters, although some of those agencies had regulations applicable to dairies.

In 2002, the California Energy Commission (CEC) provided grant funding for the Dairy Power Production Program (DPPP) to support construction of digesters at additional dairies. The program was administered by Western United Resource Development (WURD), and resulted in construction of digesters at ten dairies<sup>1</sup>. The new digesters were also used to power generators, but several dairies negotiated with utility companies to sell excess electricity. However, pricing for the surplus electricity was not favorable to the dairies and many just flared excess biogas.

No new state regulatory programs were developed that applied to the ten digesters constructed under the first round of DPPP funding, nor did local agencies develop any regulations that applied to the digesters. Starting in 2004, several counties began developing regulatory programs for dairies, but the regulations did not specifically address digesters. However, starting about 2005, new regulatory programs were enacted that affected the construction of digesters at dairies. Having to understand and comply with the new regulations was very challenging for proponents of digesters at dairies.

Most of the new regulations applied to air emissions in the San Joaquin Valley and in the South Coast Air Pollution Control Districts (APCDs). The primary affect of the new regulations was to limit the amount of nitrogen oxides (NOx) that could be released by operation of engines used to power generators. At the same time, the Central Valley RWB was developing a new regulatory program for dairies that included more stringent requirements for new lagoons such as those that could be covered to serve as an anaerobic digester. During the period that the Central Valley RWB regulations were under development, persons proposing to construct digesters at dairies in the Central Valley experienced frustrating delays in obtaining design approval from RWB staff.

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<sup>1</sup> For additional information on the DPPP and the digesters constructed under the program, go to the CEC web site at <http://www.energy.ca.gov/index.html> and do a search for "DPPP".

A second round of CEC grant funding was made available through WURD in October 2006, and nine additional dairies received funding for new digesters. At about the same time, Utility Districts developed policies for the purchase of excess electricity at rates that were more favorable to dairy operators. In May 2007, the Central Valley RWB adopted general Waste Discharge Requirements (WDR) Order R5-2007-0035 for cow dairies; the Order includes requirements applicable to construction and operation of digesters, including application of digester effluent and other wastewater to cropland. Although the APCD and RWB requirements applicable to digesters were now clearly established, the difficulty and cost of complying with the requirements resulted in delays in getting the new digesters operating. As of April 2008, only one of the additional digesters was operational.

In late 2007, a few companies proposed to construct anaerobic digesters at dairies to produce biogas and treat the biogas for injection into Utility District natural gas pipelines. The Central Valley RWB issued individual WDR orders for seven such facilities in January and March 2008. Six of the facilities stated that they would co-digest imported organic feedstocks to enhance biogas production. As of April 2008, none of these facilities were operational.

In December 2010, the Central Valley Water Board certified a final Environmental Impact Report for Waste Discharge Regulatory Program for Dairy Manure Digester and Co-Digester Facilities. The program EIR assesses the environmental impacts associated with manure digester and co-digester facilities throughout the Central Valley. Under the program the Central Valley Water Board has adopted two general orders: a general order for digester and co-digester facilities located on dairies in December 2010, and a general order for centralized digester facilities not located on a dairy in June 2011. The adoption of the general orders enables the Central Valley Water Board to reduce the time required to permit dairy digester projects by at least 75%.



Covered lagoon at the Joseph Gallo Farms methane digester.



Pump and piping at the Joseph Gallo Farms methane digester.



Piping and gauge at the Joseph Gallo Farms methane digester.



Covered lagoon digester at the Hilarides Dairy in Lindsay, CA.



Piping at the Hilarides Dairy.



Electrical control boxes at the Hilarides Dairy for methane gas-powered generators.



Plug flow digester at the Meadowbrook Dairy.



Pump and piping for the plug flow digester at Meadowbrook Dairy.



Gas control equipment at the Meadowbrook Dairy.



Gauges for the Meadowbrook Dairy methane gas line.



Methane gas-powered generator at the Meadowbrook Dairy.



Complete mix digester at Fiscalini Farms.

# Section I: Introduction

## 1. Purpose of the manual

This manual is designed to provide, in one place, the regulatory and procedural requirements specific to constructing and/or operating an anaerobic digestion treatment system (digester) to convert animal manure and/or other applicable organic feedstocks into energy or fuels. This manual provides the steps, procedures, contacts, expected costs, and timelines for establishing and operating an environmentally-acceptable digester system.

The manual reflects the current status of the permitting framework and requirements at the time of publication, and it will be updated as process and technical improvements occur or as information changes. An attempt has been made to make this manual as accurate and complete as possible, errors and omissions are always a concern. Any comments and suggestions for improvement are always welcome. While this manual should be used as a tool, there is no replacement for keeping in close communication with the multiple agencies involved in granting approvals

Anaerobic digestion is only one of a number of technologies allowing the use of renewable resources to reduce greenhouse gas emissions and protect our environment. This guidance manual is a first effort in this area of overlapping environmental and energy projects to coordinate permitting concerns so as to more efficiently develop these projects. Different technologies have the potential to effectively convert biomass feedstocks into various energy products or utilize natural resources such as solar radiation, wind, geothermal, and waves to produce energy. California State and Local regulatory agencies look forward to addressing additional areas in the future in an ongoing effort to mutually benefit and balance the State's environmental and energy needs.

## 2. Description of the digester applications covered by this manual

The various digester applications covered by this manual include:

- *Existing digesters for manure feedstocks only* – This application covers projects with existing digesters at individual sites that only use manure as a feedstock. These applications may be projects which are currently in regulatory compliance (e.g. qualified under a General Order) or may be existing projects which need to complete more stringent requirements (e.g. a dairy expansion greater than 15%)
- *New digesters for manure feedstocks only* – Under this application, new digesters or expansions of existing units at individual sites, that only use manure as a feedstock are covered. Compliance for these projects will require more time, effort, and cost than for existing units.

- *Existing digesters that co-digest manure and other organic feedstocks* – Projects under this application will have more stringent requirements than existing digesters that only treat manure feedstocks, due to the variability and types of post-processing effluent. This application applies to projects operated at individual sites.
- *New co-digesters for manure and other organic feedstocks* – This application will have the most stringent project start-up and effluent treatment requirements of all digester and co-digester project types operated at individual sites.
- *Centralized digesters and co-digesters* – This application covers the construction of new centralized facilities to treat either manure feedstocks only or the co-digestion of manure and other organic feedstocks. Projects of this type will trigger different requirements due to matters of transportation, building, siting, and land use.
- *End energy product of digestion (electricity or biogas)* – The end energy product will also differentiate regulatory requirements and may trigger incremental regulation depending on the specific operation.

### **3. Contents of the manual**

This manual will provide the following general components:

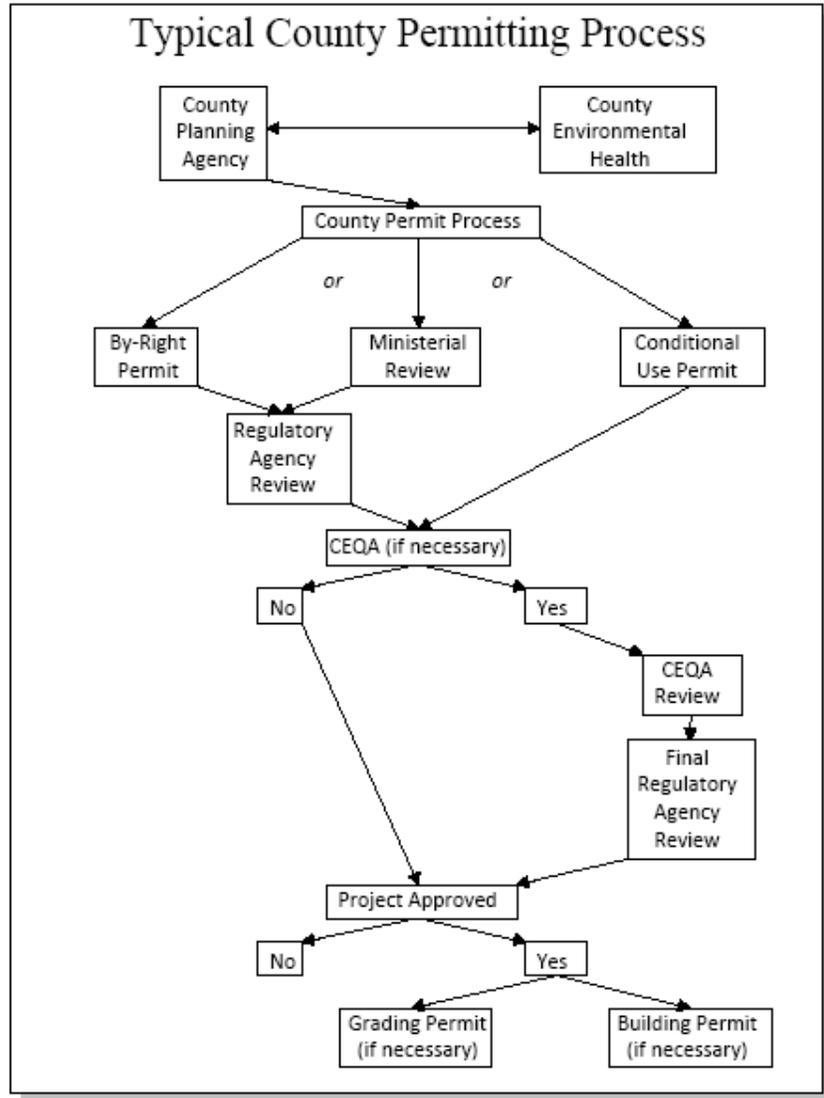
1. Flowcharts and other graphics to more quickly determine steps for establishing and operating digesters.
2. Regulatory requirements, by agency, for each type of application.
3. Permitting checklists by agency.
4. Checklists, procedures, requirements, and timelines for compliance with the California Environmental Quality Act (CEQA).
5. Samples of permit applications and permits.
6. County information and regulatory requirements.
7. Specific contact information for State and Local officials.
8. Utility connection information and contacts.
9. Information and contacts for funding and financing opportunities.
10. Useful links to agencies and utilities web pages.

#### **4. How to use this manual**

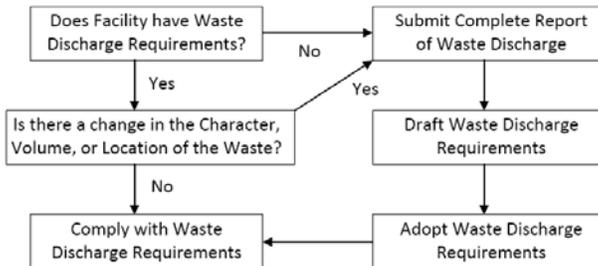
1. Review the flowcharts provided in Section II and determine what pathway that your particular application needs to follow.
2. Based on the above determination, go to the Sections (including the Appendices) for the agency permitting process and requirements that fit your project and review the information that covers the steps needed to secure the appropriate permits.
3. Review Section IX regarding CEQA and follow the steps involved to comply with CEQA.
4. Review the information in Section VIII regarding the steps and requirements to establish utility interconnection.
5. Contact the appropriate agency staff to set up a meeting to discuss your project and the permitting requirements. Arrange a similar meeting with the electric and gas utility to discuss requirements for establishing electric or gas interconnection.
6. Use the sample permit applications and permits as a guide for submitting your applications and obtaining your permits.
7. After submitting your completed application, communicate and work with the agencies involved to address any problems, questions, or concerns. Try to work with them on an on-going basis in order to help speed up the process.
8. Track the progress of the permit application and provide feedback to Cal EPA on the handling of the project and the timeliness.
9. If you have any questions or concerns, contact the appropriate agency person listed in the manual or contact Robert Crandall 530-224-4845; [rcrandall@waterboards.ca.gov](mailto:rcrandall@waterboards.ca.gov)
10. Any comments and suggestions related to this manual and the permitting process are always welcome.

## **Section II: Flowcharts and Checklists of Permitting Compliance**

# 1. Digester Permitting Process Flowchart



## Water Quality Control Board Permitting of New Digesters for Animal Wastes

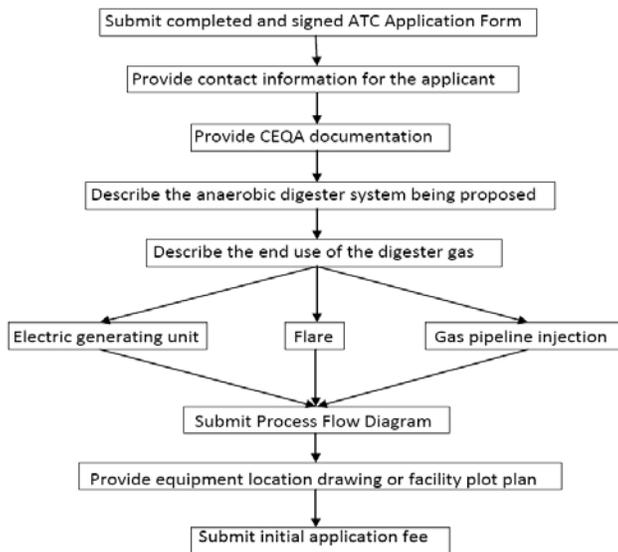


Note: Requirements of the California Environmental Quality Act are not addressed.

## California Department of Resources, Recycling and Recovery



## Air District Digester Permitting



## **2. Digester Permitting Process Checklists**

### **(1) Checklist for Local Land Use**

- By-right, administrative approval, use permit
- Discretionary permit – California Environmental Quality Act (CEQA) analysis
- No local discretionary permit – CEQA defaults to either the Regional Water Board or the Air District
- Grading permit, building permit

### **(2) Checklist for Regional Water Board Permit Application (Report of Waste Discharge)**

**(This is a general summary. Please see Section V for further information.)**

- Submit a Report of Waste Discharge (RWD) consisting of a Form 200, a filing fee established by the State Water Board, and technical data needed to prepare WDRs to the appropriate Regional Water Board office.
- In addition to the above, for a proposed discharge to surface waters of the United States Federal Forms 1 and 2B should be included with the RWD.
- For a digester facility eligible for coverage under a Waste Discharge Requirements (WDRs) General Order, submit a Notice of Intent (NOI) and a filing fee established by the State Water Board.

### **(3) Checklist for Air District Permit Application**

- Submit completed and signed ATC Application Form
- Provide contact information for the applicant
- Provide CEQA documentation
- Describe the anaerobic digester system being proposed
- Describe the end use of the digester gas
- Submit Process Flow Diagram
- Provide equipment location drawing or facility plot plan
- Submit initial application fee

ATC application forms and supplemental application forms can be found in the Air District's website at: <http://www.valleyair.org/busind/pto/ptoforms/1ptoformidx.htm>

**(4) Checklist for California Department of Resources, Recycling and Recovery**

- Contact the applicable Local Enforcement Agency to determine whether an approval is required.  
<http://www.calrecycle.ca.gov/LEA/Directory/default.asp>
  
- If yes, determine what type, or tier, of approval is required.
  - a. Enforcement Agency Notification Tier
  - b. Full Solid Waste Facilities Permit Tier

## Section III: Agency Regulatory Jurisdiction and Contacts

The regulatory agencies which have primary jurisdiction with respect to anaerobic digestion projects in California and their principal authority are as follows:

Agency	Permit Required	Statutes & Regulations
County/City	Conditional Land Use Permit  Building Permit	Various by Local Ordinances
Regional Water Quality Control Board	Waste Discharge Requirements (WDRs)	California Water Code, Section 13260
Local Air Pollution Control District	Authority to Construct Permit	Rules 2010, 2201, 4550, 4570, 4702
California Department of Resources Recycling and Recovery	Solid Waste Facilities Permit	California Code of Regulations, Title 14

California Environmental Quality Act (CEQA) compliance is implemented by the State or Local Lead Agency (see Section IX). Depending on the specific location and circumstances, various other Federal, State, or Local agencies may participate as Responsible Agencies under CEQA if the project may have some effect on their area of jurisdiction.

The California Public Utilities Commission (CPUC) regulates distribution of electricity and pipeline biomethane through regulated utilities (see Section VIII).

The Federal Department of Transportation (DOT), the California Department of Transportation (Caltrans), and the California Highway Patrol oversee distribution of biofuels over-the-road.

If the project handles, produces, stores, treats, or disposes of hazardous wastes, the Department of Toxic Substances Control will be involved.

Specific jurisdiction and contacts for the primary agencies are as follows:

### 1. Regional Water Quality Control Boards

#### Jurisdiction

**Region 1** – North Coast region, which comprises all basins including Lower Klamath Lake and Lost River Basins draining into the Pacific Ocean from the California-Oregon state line southerly to the southerly boundary of the watershed of Estero de San Antonio and Stemple Creek in Marin and Sonoma Counties.

**Region 2** – San Francisco Bay region, which comprises San Francisco Bay, Suisun Bay, from Sacramento River and San Joaquin River westerly from a line which passes between Collinsville and Montezuma Island and follows thence the boundary common to Sacramento and Solano Counties and that common to Sacramento and Contra Costa Counties to the westerly boundary of the watershed of Markley Canyon in Contra Costa County, all basins draining into the bays and rivers westerly from this line and all basins draining into the Pacific Ocean between the southerly boundary of the North Coast region and the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties.

**Region 3** – Central Coast region, which comprises all basins, including Carrizo Plain in San Luis Obispo and Kern Counties, draining into the Pacific Ocean from the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties to the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek.

**Region 4** – Los Angeles region, which comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages.

**Region 5** – Central Valley region, which comprises all basins including Goose Lake Basin draining into the Sacramento and San Joaquin Rivers to the easterly boundary of the San Francisco Bay Region near Collinsville.

**Region 6** – Lahontan region - which comprises all basins east of the Santa Ana, Los Angeles, and Central Valley regions from the California-Oregon boundary to the southerly boundary located in Los Angeles and San Bernardino Counties of the watersheds draining into Antelope Valley, Mojave River Basin, and Dry Lake Basin near Ivanpah

**Region 7** – Colorado River Basin - which comprises all basins east of the Santa Ana and San Diego regions draining into the Colorado River, Salton Sea, and local sinks from the southerly boundary of the Lahontan region to the California-Mexico boundary.

**Region 8** – Santa Ana region - which comprises all basins draining into the Pacific Ocean between the southeasterly boundary of the Los Angeles region and a line which follows the drainage divide between Muddy and Moro Canyons from the ocean to the summit of San Joaquin Hills; thence along the divide between lands draining into Newport Bay and into Laguna Canyon to Nigal Road; thence

along Nigel Road and Los Aliso Avenue to the divide between Newport Bay and Aliso Creek drainages; then along that divide and the southeasterly boundary of the Santa Ana River drainage to the divide between Baldwin Lake and Mojave Desert drainages; thence along that divide to the divide between Pacific Ocean and Mojave Desert drainages.

**Region 9** – San Diego region, which comprises all basins draining into the Pacific Ocean between the southern boundary of the Santa Ana region and the California-Mexico boundary.

**RWQCB contacts** – Regional Board contacts for each of the regions are listed below.

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14440 Civic Drive, Suite 200  
Victorville, CA 92392

Region 7 – Jose Figueroa-Acevedo  
[jfigueroa-acevedo@waterboards.ca.gov](mailto:jfigueroa-acevedo@waterboards.ca.gov)  
(760) 776-8967  
John Carmona - Supervisor  
[jcarmona@waterboards.ca.gov](mailto:jcarmona@waterboards.ca.gov)  
(760) 341-4521  
Colorado River Basin Region  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92260

Region 8 – Steve Mayville  
[smayville@waterboards.ca.gov](mailto:smayville@waterboards.ca.gov)  
(951) 782-4992  
Michael Adackapara - Supervisor  
[madacapara@waterboards.ca.gov](mailto:madacapara@waterboards.ca.gov)  
(951) 782-3238  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, CA 92501-3339

Region 9 – Joann Cofranceco  
[jcofranceco@waterboards.ca.gov](mailto:jcofranceco@waterboards.ca.gov)  
(858) 637-5589  
Bob Morris - Supervisor  
[bmorris@waterboards.ca.gov](mailto:bmorris@waterboards.ca.gov)  
(858) 467-2962  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340

## 2. Air Districts

The specific Air District with jurisdiction in your area can be identified by using the following link and providing zip code, city, or county where the project will be located:  
<http://www.arb.ca.gov/app/dislookup/dislookup.php>

The contacts for the various Air Districts throughout California can be located using the following link:  
<http://www.arb.ca.gov/capcoa/roster.htm>

## 3. California Department of Resources Recycling and Recovery/Local Enforcement Agencies

Although the Department of Resources Recycling and Recovery (CalRecycle) is responsible for approving permits, each permit is processed and issued by a Local Enforcement Agency (LEA). The LEA is the primary contact for the regulation of solid waste handling, processing or disposal activities, including permitting requirements. To determine whether a permit is required for any proposed facility each potential operator should **contact the appropriate county LEA and work with them directly regarding the applicability of regulatory requirements.** These local enforcement agencies are certified by CalRecycle. Visit the LEA Directory, where a search for the appropriate contact person can be conducted by county, at:

<http://www.calrecycle.ca.gov/LEA/Directory/default.asp>

You may also visit the CalRecycle Staff Assignments by LEA Jurisdiction for assistance at: <http://www.calrecycle.ca.gov/LEA/CountyAssign.asp>

## 4. County/City Agencies

If your facility is located in **San Joaquin County** and if facility changes are planned, such as (but not limited to):

- Addition of cows beyond permit number(s)
- Replacing engines rated over 50 horsepower
- Changes in water use (volume, source, location)
- Changes in ponds and/or lagoons
- Construction of freestalls or other structures (milk barn, commodity barn)
- Adding or replacing gasoline dispensing equipment
- Changes in manure handling (solid separation, advanced treatment)
- Changes in cropland for manure application

You may need the following permits or modifications to existing permits:

<b>Permit Modification</b>	<b>Agency/ Department</b>	<b>Contact</b>
Ag or Garage Building Permit	County Community Development	<b>Kerry Sullivan</b> 1810 E. Hazelton Ave., Stockton, CA 95205 (209) 468-3124 Fax (209) 468-3163
	County Planning	See Community Development
Well Installation or Destruction Solid Waste Handling	County Environmental Health	<b>Mike Higgins</b> 304 E. Weber Avenue, Third Floor, Stockton, CA 95202 (209) 468-3437 Fax (209) 464-0138
Waste Discharge Requirements	Regional Water Board	<b>Charlene Herbst</b> Sacramento Main Office 11020 Sun Center Dr., #200, Rancho Cordova, CA 95670-6114 (916) 464-3291 Fax: (916) 464-4645 <a href="http://www.waterboards.ca.gov/centralvalley/">http://www.waterboards.ca.gov/centralvalley/</a>
Authority to Construct (ATC)	SJV Air Pollution Control District	<b>Small Business Office</b> North Region Office 4800 Enterprise Way, Modesto, CA 95356 SBA Hotline: (209) 557-6446 <a href="http://www.valleyair.org/">http://www.valleyair.org/</a>

Other resources:

San Joaquin County website: <http://www.sjgov.org/>

UCCE: <http://cesanjoaquin.ucdavis.edu/>

Trade associations or private consultants may also be able to assist you.



If your facility is located in **Merced County** and if facility changes are planned, such as (but not limited to):

- Addition of cows beyond permit number(s)
- Replacing engines rated over 50 horsepower
- Changes in water use (volume, source, location)
- Changes in ponds and/or lagoons
- Construction of freestalls or other structures (milk barn, commodity barn)
- Adding or replacing gasoline dispensing equipment
- Changes in manure handling (solid separation, advanced treatment)
- Changes in cropland for manure application

<b>Permit Type</b>	<b>Agency/Department</b>	<b>Contact</b>
Conditional Use Permit	County Planning	2222 M Street Merced, CA 95340 (209) 385-7654 Fax: (209) 726-1710
Waste Discharge Requirements	Regional Water Board	<b>David Sholes</b> Fresno Office 1685 E. St, Fresno, CA 93706 (559) 445-5093 Fax: (559) 445-5910 <a href="http://www.waterboards.ca.gov/centralvalley/">http://www.waterboards.ca.gov/centralvalley/</a>
Authority to Construct (ATC)	Air Resources Board	<b>Small Business Office</b> North Region Office 4800 Enterprise Way, Modesto, CA 95356 SBA Hotline: (209) 557-6446 <a href="http://www.valleyair.org/">http://www.valleyair.org/</a>

You may need the following permits or modifications to existing permits:

Other resources:

Merced County website: <http://www.co.merced.ca.us/>

UCCE: <http://cemerced.ucdavis.edu/>

Alejandro Castillo, Ph.D.  
UCCE in Merced County  
[arcastillo@ucdavis.edu](mailto:arcastillo@ucdavis.edu)  
(209) 385-7403

Trade associations and private consultants may also be able to assist you.



If your facility is located in **Stanislaus County** and if facility changes are planned, such as (but not limited to):

- Addition of cows beyond permit number(s)
- Replacing engines rated over 50 horsepower
- Changes in water use (volume, source, location)
- Changes in ponds and/or lagoons
- Construction of freestalls or other structures (milk barn, commodity barn)
- Adding or replacing gasoline dispensing equipment
- Changes in manure handling (solid separation, advanced treatment)
- Changes in cropland for manure application ...

Permit Type	Agency/Department	Contact
CAF Statement of Expansion – Dairy Cow Facility	County Planning	1010 10 <sup>th</sup> Street, Ste 3400 Modesto, CA 95354 (209) 525-6330 Fax: (209) 525-5911
Dairy Farm Water Protection Handbook (relates to well construction)	County Environmental Resources	Rowe Barney (rbarney@envres.org) Manager, Milk and Dairy Program Department: 3800 Cornucopia Way, Suite C Modesto, CA 95358 (209) 525-6700 Fax: (209) 525-6774
Waste Discharge Requirements	Regional Water Board	<b>Charlene Herbst</b> Sacramento Main Office 11020 Sun Center Dr., #200, Rancho Cordova, CA 95670-6114 (916) 464-3291 Fax: (916) 464-4645 <a href="http://www.waterboards.ca.gov/centralvalley/">http://www.waterboards.ca.gov/centralvalley/</a>
Authority to Construct (ATC)	Air Resources Board	<b>Small Business Office</b> North Region Office 4800 Enterprise Way, Modesto, CA 95356 SBA Hotline: (209) 557-6446 <a href="http://www.valleyair.org/">http://www.valleyair.org/</a>

You may need the following permits or modifications to existing permits:

Other resources:

Stanislaus County website: <http://www.co.stanislaus.ca.us/>

UCCE: Marsh L. Campbell-Mathews  
[mcmathews@ucdavis.edu](mailto:mcmathews@ucdavis.edu)  
(209) 525-6800

Trade associations and private consultants may also be able to assist you.



If your facility is located in **Kings County** and if facility changes are planned, such as (but not limited to):

- Addition of cows beyond permit number(s)
- Replacing engines rated over 50 horsepower
- Changes in water use (volume, source, location)
- Changes in ponds and/or lagoons
- Construction of freestalls or other structures (milk barn, commodity barn)
- Adding or replacing gasoline dispensing equipment
- Changes in manure handling (solid separation, advanced treatment)
- Changes in cropland for manure application ...

You may need the following permits or modifications to existing permits:

Permit Type	Agency/Department	Contact
Building Permit	County Building	Carl Goff, Deputy Building Official
Site Plan Review	County Planning	Bill Zumwalt, Director
Haz. Materials Business Plan	County Environmental Health	Keith Winkler, Dir. EHS Regional Water: Fresno Office
Waste Discharge Requirements	Regional Water Board	<b>Charlene Herbst</b> Sacramento Main Office 11020 Sun Center Dr., #200, Rancho Cordova, CA 95670-6114 (916) 464-3291 Fax: (916) 464-4645 <a href="http://www.waterboards.ca.gov/centralvalley/">http://www.waterboards.ca.gov/centralvalley/</a>
Authority to Construct (ATC)	Air Resources Board	<b>Small Business Office</b> North Region Office 4800 Enterprise Way, Modesto, CA 95356 SBA Hotline: (209) 557-6446 <a href="http://www.valleyair.org/">http://www.valleyair.org/</a>
Air Quality Permits	San Joaquin Unified Air Pollution Control District	

Other resources:

County website: Kings County Planning Web-site:  
[www.ceres.ca.gov/planning/counties/kings](http://www.ceres.ca.gov/planning/counties/kings) (559) 582-3211 Ext 2670

UCCE: Carol Collar [ccollar@ucdavis.edu](mailto:ccollar@ucdavis.edu) (559) 582-3211 Ext 2739

Trade Associations and Private Consultants may also be able to assist you.



If your facility is located in “X”County and if facility changes are planned, such as (but not limited to):

- Addition of cows beyond permit number(s)
- Replacing engines rated over 50 horsepower
- Changes in water use (volume, source, location)
- Changes in ponds and/or lagoons
- Construction of freestalls or other structures (milk barn, commodity barn)
- Adding or replacing gasoline dispensing equipment
- Changes in manure handling (solid separation, advanced treatment)
- Changes in cropland for manure application

You may need the following permits or modifications to existing permits:

Permit Type	Agency/Department	Contact
	County Building	
	County Planning	
	County Environmental Health	
Waste Discharge Requirements	Regional Water Board	<b>Charlene Herbst</b> Sacramento Main Office 11020 Sun Center Dr., #200, Rancho Cordova, CA 95670-6114 (916) 464-3291 Fax: (916) 464-4645 <a href="http://www.waterboards.ca.gov/centralvalley/">http://www.waterboards.ca.gov/centralvalley/</a>
Authority to Construct (ATC)	Air Resources Board	<b>Small Business Office</b> North Region Office 4800 Enterprise Way, Modesto, CA 95356 SBA Hotline: (209) 557-6446 <a href="http://www.valleyair.org/">http://www.valleyair.org/</a>

Other resources:

County website:

UCCE:

Trade Associations and Private Consultants may also be able to assist you.

## **Section IV: Air District Permitting Process and Requirements for Digesters**

### **Overview of Air District Permitting Requirements**

There are 35 Air Pollution Control Districts and Air Quality Management Districts throughout the State of California. These air districts are responsible for implementing and enforcing federal, state, and local air quality regulations. The regulations vary between air districts, and are generally more stringent in areas that face the greatest challenges to attaining health-based national and state air quality standards. The following discussion is centered on the requirements of the San Joaquin Valley Air Pollution Control District. Requirements for other air districts will vary. A map showing the location of the air districts in California can be found on the California Air Resources Board (ARB) website at: <http://www.arb.ca.gov/drdb/dismap.htm>

### **1. Introduction to the San Joaquin Valley Air Pollution Control District**

The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies.

The San Joaquin Valley Air District has the primary responsibility for reducing air pollution from stationary operations in the San Joaquin Valley. The regulatory authority of the San Joaquin Valley Air District, as well as other California air districts, is established by California Health & Safety Code, Division 26 – Air Resources, Part 3 – Air Pollution Control Districts. (Additional information can be found at the following link: [http://www.arb.ca.gov/bluebook/bb08/head/hea\\_d\\_26\\_p\\_3.htm](http://www.arb.ca.gov/bluebook/bb08/head/hea_d_26_p_3.htm))

Further information about the San Joaquin Valley Air District and its various programs to improve air quality can be found on the District website at: <http://www.valleyair.org/>

For answers to specific questions related to obtaining air permits for digester projects in the San Joaquin Valley, please contact the San Joaquin Valley Air District Permit Services Division at (559) 230-6000.

Contact information for the other air districts in California can be found on the California Air Resources Board (ARB) website at: <http://www.arb.ca.gov/capcoa/roster.htm>

## 2. Checklist for Permit Application

- \_\_\_ Completed and signed Authority to Construct (ATC) Application Form
- \_\_\_ Contact information for the applicant
- \_\_\_ Completed supplemental ATC application form(s), including make, model, and rating, for the equipment being proposed (e.g. engine, boiler, flare, turbine, etc.)
- \_\_\_ Description of the anaerobic digester system being proposed including, but not limited to, the following:
  - a. Type of digester (e.g. covered lagoon, plug flow, complete mix, etc.)
  - b. Listing of equipment and operating schedule necessary to operate the digester system, such as pumps, vacuum trucks, etc.
  - c. Operating temperature of digester (e.g. Ambient, Mesophilic, Thermophilic, etc.) and a description of equipment used to maintain the temperature of heated digesters
  - d. Dimensions of the digester or covered lagoon
  - e. Method that manure will be collected and delivered to the digester or lagoon (flush, scrape, vacuum, etc.)
  - f. If applicable, a description of other wastes that will be added to the digester (whey, food processing wastes, etc.)
  - g. Hydraulic Retention Time of the digester
  - h. Solids loading rate of the digester
  - i. Volatile solids destruction rate
  - j. Amount of gas (scf or MMscf) that will be produced by the digester system daily and annually
  - k. The expected composition of the biogas (percent methane, percent CO<sub>2</sub>, and H<sub>2</sub>S concentration)
- \_\_\_ Description of the end use of the digester gas (for example: insertion into natural gas pipeline, onsite power generation, fuel for a boiler, etc.) including:
  - a. Description of the process or equipment that will be used to remove H<sub>2</sub>S from the digester gas, H<sub>2</sub>S removal efficiency, and quantity of H<sub>2</sub>S remaining in the gas prior to combustion
  - b. Description of any processes used to remove CO<sub>2</sub> and/or moisture from the digester gas
- \_\_\_ Process Flow Diagram
- \_\_\_ Equipment location drawing or facility plot plan
- \_\_\_ Information required to assess health risk (distance and direction to nearest residence and business, stack height, stack diameter, etc.)
- \_\_\_ Initial application fee paid

ATC application forms and supplemental ATC application forms can be found in the Air District's website at: <http://www.valleyair.org/busind/pto/ptoforms/1ptoformidx.htm>

### **3. Application Review Process**

After an application is submitted, District staff will review the application to determine if all information needed to evaluate the project has been provided. If additional information is required, the applicant will be informed of the specific items that are still required for processing and the project will be deemed incomplete. District staff will work with the applicant to attempt to resolve outstanding issues so that the project can be deemed complete. After all information required to process the project has been provided, the application will be deemed complete and assigned to District staff for processing. Complete applications are generally processed in less than 180 days. Individual permit requirements are determined on a case-by-case basis and may differ from the requirements contained in previously-issued ATC permits.

### **4. Permit Fees**

#### Permit Application Fees

The District assesses fees for processing permit applications in accordance with District Rule 3010 - Permit Fee. An initial application filing fee is required for each permit unit being constructed or modified and an hourly processing fee is charge based on the amount of staff time required to evaluate the project. The initial application filing fees are credited towards the hourly processing fee. Upon deeming a project complete, the District will provide an estimate of the total fee required to process an application.

#### Annual Permit Fees

In order to cover the cost of implementing an effective permitting program, performing inspections of facilities and equipment, and ensuring compliance with applicable requirements, the District assesses annual permit fees in accordance with District Rule 3020 - Permit Fee Schedules. The applicable annual permit fee is based on the rating or capacity of the equipment under permit.

For information regarding the District's current application fees and annual permit fees, please refer to District Rules 3010 and 3020, which can be found on the District's website at: <http://www.valleyair.org/rules/1ruleslist.htm>

### **5. Rule 2010      Permits Required**

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation that may emit air contaminants or may reduce the emission of air contaminants.

For non-agricultural operations, air permits are generally required for equipment with the potential to emit any air contaminant in excess of two pounds per day. For agricultural operations, any contiguous facility with emissions equal to or greater than ½ of any of the major source emissions threshold levels or classified as a Large Confined Animal Facility

(CAF) is also subject to air District permitting requirements. Air permitting of agricultural operations is generally required because of emissions of oxides of nitrogen (NO<sub>x</sub>) and/or Volatile Organic Compounds (VOC). In the San Joaquin Valley the major source thresholds for NO<sub>x</sub> and VOC are currently 10 tons per year and air permits are required for agricultural operations with NO<sub>x</sub> or VOC emissions greater than or equal to 5 tons per year. Operations that are subject to air district permitting requirements are required to obtain an ATC permit from the District prior to construction or installation of any equipment or process that may emit air contaminants.

The Air District's Agricultural Emissions Calculator can be used to determine if an agricultural operation requires a permit. The Agricultural Emissions Calculator can be found on the Air District's website at:

[http://www.valleyair.org/General\\_Info/AGLoader.htm](http://www.valleyair.org/General_Info/AGLoader.htm)

Important Date:

January 1, 2004 – Agricultural operations became subject to Air District permitting requirements.

## **6. Rule 2201      New and Modified Stationary Source Review Rule**

District Rule 2201 requires that new and modified units that result in an increase of emissions of 2.0 lb/day or more install or utilize the Best Available Control Technology (BACT) to minimize emissions of air contaminants. BACT is the most stringent emission limitation or control technique of the following that is considered "achieved in practice" for such category and class of source or is an emission limitation or control technique that is found by the Air District to be cost effective and technologically feasible for reducing emissions from the operation. Examples of BACT include: catalysts for internal combustion (IC) engines; low-NO<sub>x</sub> burners for boilers, water heaters, and flares; and scrubbing to remove H<sub>2</sub>S from digester gas. Potential BACT requirements for various proposed units or operations can be found in the Air District's BACT Clearinghouse at: <http://www.valleyair.org/busind/pto/bact/bactchidx.htm>

The "Achieved in Practice" category in the District's BACT Guidelines gives an idea of the minimum requirements that must be met. A cost analysis is performed prior to requiring any technology that is not considered "achieved in practice". The applicable BACT requirements are periodically updated to reflect advances in emission control technology and the reclassification of technologies that were formerly considered "technologically feasible" as "achieved in practice".

The San Joaquin Valley Air basin is classified as Extreme nonattainment for the Federal 8-hour ozone standard - the worst classification possible and is also classified as nonattainment for the Federal standard for fine particulate matter. Because minimizing and reducing NO<sub>x</sub> emissions in the San Joaquin Valley is critical to bringing the San Joaquin Valley into attainment with health-based standards for ozone and particular matter, one of the main focuses of BACT is the reduction of NO<sub>x</sub> emissions from

proposed digester projects to the maximum extent feasible. To achieve this goal, the cost and feasibility of control technologies and alternate processes will be evaluated during the BACT analysis for each digester project. Because SO<sub>x</sub> is an important precursor for fine particulate matter, emissions of SO<sub>x</sub> must also be minimized. To meet the District BACT for SO<sub>x</sub> and PM from digester projects, scrubbing of the digester gas to remove sulfur compounds (down to 40-50 ppmv) prior to combustion is also required.

Some of the control options, processes, and alternative equipment that the Air District has currently identified and that have the potential to reduce NO<sub>x</sub> and SO<sub>x</sub> emissions from digester projects are listed in the table below.

<b>Potential BACT Requirements to Reduce NO<sub>x</sub> &amp; SO<sub>x</sub> Emissions from Digester Operations</b>		
<b>Process: Production of Renewable Energy from Digester Gas</b>		
Pollutant	Minimum Requirement for Engines	Technologically Feasible or Alternate Processes & Equipment
NO <sub>x</sub> <sup>1</sup>	≤ 0.15 g-NO <sub>x</sub> /bhp-hr (approximately 9-11 ppmvd @ 15% O <sub>2</sub> ) (e.g. rich-burn engine with 3-way catalyst, lean-burn engine with SCR)	<ul style="list-style-type: none"> <li>a. Biogas-powered Fuel Cell</li> <li>b. Biogas-fired turbine or microturbine (≤ 9 ppmv @ 15% O<sub>2</sub>)</li> <li>c. Biogas conditioning and distribution via the Utility Pipeline Network as alternative process</li> </ul>
SO <sub>x</sub>	≤ 40 ppmv Sulfur in Digester Gas	
<b>Process: Digester Gas-Fired Boilers, Steam Generators, and Process Heaters</b>		
Pollutant	Minimum Requirement	Technologically Feasible or Alternate Processes & Equipment
NO <sub>x</sub> <sup>2</sup>	Whichever is lower: <ul style="list-style-type: none"> <li>a. 9 ppmvd @ 3% O<sub>2</sub> (0.012 lb/MMBtu/hr) Low NO<sub>x</sub> burner system, or</li> <li>b. The Applicable Standard NO<sub>x</sub> Emission Limit from District Rule 4320</li> </ul>	The Applicable Enhanced Schedule NO <sub>x</sub> Emission Limit from District Rule 4320
SO <sub>x</sub>	≤ 40 ppmv Sulfur in Digester Gas	

<sup>1</sup> This standard is currently under review, and may be updated in the near future.

<sup>2</sup> The BACT requirements for NO<sub>x</sub> emissions from digester gas-fired Boilers, Steam Generators, and Process Heaters are based on District Rule 4320. The requirements for District Rule 4320 can be found at the following link: <http://www.valleyair.org/rules/currnrules/r4320.pdf>

<i>Potential BACT Requirements to Reduce NO<sub>x</sub> &amp; SO<sub>x</sub> Emissions from Digester Operations</i>		
<b>Process: Digester Gas-Fired Flares</b>		
Pollutant	Minimum Requirement	Technologically Feasible or Alternate Processes & Equipment
NO <sub>x</sub>	Enclosed flare and NO <sub>x</sub> emissions ≤ 0.06 lb/MMBtu	Ultra-Low NO <sub>x</sub> flare with NO <sub>x</sub> emissions ≤ 0.03 lb/MMBtu
SO <sub>x</sub>	≤ 40 ppmv Sulfur in Digester Gas	

The technologies listed in the above table, as well as other potential methods to reduce emissions, will be considered in the BACT Analysis for each digester project. Please note that the above BACT options are subject to change as technologies improve and new information is made available to the Air District.

## **7. Rule 4550      Conservation Management Practices (CMP)**

The purpose of this rule is to limit fugitive dust emissions from agricultural operation sites located within the San Joaquin Valley. This rule applies to the following agricultural operations:

1. Any farm with 100 or more contiguous acres of cropland
2. Any dairy with 500 or more mature dairy cows (milking and dry)
3. Any other cattle facility, besides dairy facilities and veal calf facilities, with 190 or more cattle (heifers, steers, bulls, etc.)
4. Any poultry facility with 55,000 or more turkeys
5. Any poultry facility with 125,000 or more chickens (other than laying hens)
6. Any poultry facility with 82,000 or more laying hens

Agricultural operations subject to this rule must submit a CMP plan to the Air District for approval. The CMP plan will contain practices that the operator must implement at each site to reduce fugitive dust. The operator must choose from the approved list of CMPs. Examples of CMPs include paving unpaved road areas, posting speed limits, and applying water or road oil to unpaved areas. A complete list of approved CMPs can be found at the following link: <http://www.valleyair.org/rules/currnrules/r4550CMPList.pdf>

CMP Handbooks can also be found at the following links on the Air District's website at: [http://www.valleyair.org/farmpermits/updates/cmp\\_handbook.pdf](http://www.valleyair.org/farmpermits/updates/cmp_handbook.pdf) and [http://www.valleyair.org/farmpermits/updates/cmp\\_poultry\\_handbook.pdf](http://www.valleyair.org/farmpermits/updates/cmp_poultry_handbook.pdf)

Your local NRCS office may be able to assist you in choosing appropriate CMPs for your operation.

## 8. Rule 4570      Confined Animal Facilities (CAF)

The purpose of this rule is to limit emissions of Volatile Organic Compounds (VOCs) from Confined Animal Facilities (CAF) located within the San Joaquin Valley. CAFs subject to the requirements of this rule must utilize the best management practices to reduce VOC emissions. The operator must choose the minimum number of approved practices required by the rule for each applicable category (feed, corrals, freestalls, poultry house, liquid waste, etc.). Examples of approved practices to reduce VOC emissions include feeding all animals in accordance with National Research Council guidelines, utilization of an anaerobic treatment lagoon for storage of liquid animal waste, and increased removal of manure from corrals.

The complete text for District Rule 4570 can be found on the Air District’s website at: [http://www.valleyair.org/rules/currnrules/R4570\\_1010.pdf](http://www.valleyair.org/rules/currnrules/R4570_1010.pdf)

The table shows the District Rule 4570 regulatory thresholds for the different types of CAFs.

<b>CAF Thresholds for Regulation</b>	
<b>Livestock Category</b>	<b>Regulatory Threshold On and after October 22, 2010</b>
Dairy	500 milking cows
Beef Feedlots	3,500 beef cattle
Other Cattle Facility	7,500 calves, heifers, or other cattle
Poultry Facilities	
Chicken	400,000 head
Duck	400,000 head
Turkey	100,000 head
Swine Facility	3,000 head
Horses Facility	3,000 head
Sheep and Goat Facilities	15,000 head of sheep, goats, or any combination of the two
Any livestock facility not listed above	30,000 head

Application forms for Rule 4570 can be found on the Air District’s website at: [http://www.valleyair.org/General\\_Info/AGLoader.htm](http://www.valleyair.org/General_Info/AGLoader.htm)

## 9. Rule 4702      Internal Combustion Engines – Phase 2

The purpose of this rule is to limit the emissions of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. This rule applies to stationary and transportable engines rated greater than

50 hp. Rule 4702 requires the operators of agricultural engines (including digester gas-fired engines) to replace, re-power, or retrofit the engines to reduce emissions to the levels allowed by this rule. This requirement does not apply to engines used exclusively as emergency standby engines. All engines must be operated in accordance with the manufacturer's specifications and must be equipped with non-resettable time meter or other approved method to track usage. The BACT emission limits will be more stringent than the emission limits required by this rule; however, existing engines will need to comply with the emission limits under Rule 4702.

San Joaquin Valley Air District compliance assistance bulletins that provide further details on compliance with District Rule 4702 and various other San Joaquin Valley Air District regulations can be found on the District's website at the following link:  
[http://www.valleyair.org/busind/comply/compliance\\_assistance\\_bulletins.htm](http://www.valleyair.org/busind/comply/compliance_assistance_bulletins.htm)

## **Section V: Regional Water Board Permitting Process and Requirements**

### **1. Regulatory Authority**

There are nine Regional Water Quality Control Boards (Regional Water Boards) in California which have the responsibility for protecting the surface water, groundwater, and coastal waters within their respective regions. A map showing regional boundaries and links to each of the nine Regional Water Board websites can be found on the State Water Resources Control Board (State Water Board) website at [http://www.waterboards.ca.gov/waterboards\\_map.shtml](http://www.waterboards.ca.gov/waterboards_map.shtml)

Regional Water Boards have the authority to regulate discharges of waste to land associated with anaerobic digesters in California. Section 13260 of the California Water Code (CWC) requires any person discharging or proposing to discharge waste that could affect the quality of waters of the state to submit a report of waste discharge (RWD) to the appropriate Regional Water Board unless the requirement is waived pursuant to section 13269.

In accordance with section 13263 of the CWC, a Regional Water Board, after any necessary hearing, shall prescribe individual waste discharge requirements (WDRs), general WDRs for a class of similar discharges, or a waiver of WDRs. The WDRs shall implement relevant water quality control plans and take into consideration beneficial uses to be protected, water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and provisions of section 13241 of the CWC.

### **2. Report of Waste Discharge**

As indicated in the previous section, the CWC requires any person discharging or proposing to discharge waste that could affect the quality of waters of the state to submit an RWD to the appropriate Regional Water Board. An RWD is also needed for any material change or proposed change in the character, location, or volume of the discharge.

A typical RWD consists of: 1) a Form 200, 2) a filing fee established by the State Water Board, and 3) technical data needed to prepare WDRs. In addition, for proposed discharges to surface waters of the United States federal Forms 1 and 2B should be included with the RWD. The web links to these documents are as follows:

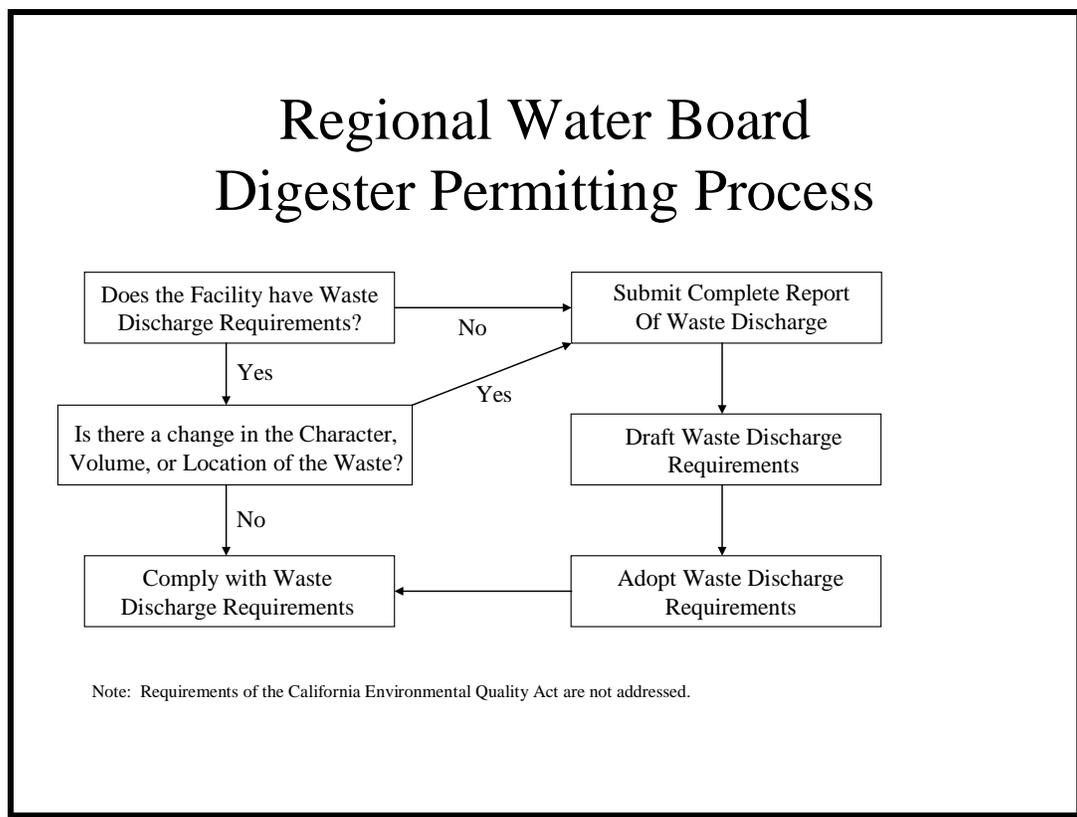
- Form 200 can be found at [http://www.waterboards.ca.gov/publications\\_forms/forms/](http://www.waterboards.ca.gov/publications_forms/forms/)
- Forms 1 and 2B can be found at [http://www.waterboards.ca.gov/water\\_issues/programs/npdes/](http://www.waterboards.ca.gov/water_issues/programs/npdes/)

If the proposed digester facility is eligible for coverage under a WDRs General Order (General Order) the application process typically requires the submittal of: 1) a Notice of Intent (NOI) and 2) a filing fee. Currently, there are two General Orders for dairy manure digesters and co-digester facilities located within the Central Valley Region or Region 5 (discussed in Section 4 below). The Central Valley Region is where most of the State's dairies reside.

Prior to submittal of an RWD or NOI, it is recommended that the project proponent contact the appropriate Regional Water Board office to get the correct filing fee and guidance on the technical information needed to prepare the RWD or NOI. While the RWD submittal process for the nine Regional Water Boards is similar, there may be variations on the technical data needed based on differences in geographic settings, applicable water quality control plans, and programs.

### 3. Digester Permitting Process

The figure below illustrates the Regional Water Board permitting process for digesters not eligible for coverage under a General Order.



If an RWD is required based on the above figure, it should be submitted early enough in the process so that WDRs can be adopted prior to initiation of discharge. Section 13264 of the California Water Code states that a discharger shall not initiate a new discharge or make a material change to a discharge prior to submittal of the complete RWD and no person shall take any of these actions after filing the complete RWD before one of the following occurs first:

1. The adoption of WDRs.
2. The expiration of 140 days after submittal of the complete RWD if any of the following applies:

- The project is not subject to the California Environmental Quality Act (CEQA);
- The Regional Water Board is the lead agency for CEQA, a negative declaration is required, and at least 105 days have expired since the Regional Water Board assumed lead agency responsibility;
- The Regional Water Board is the lead agency for CEQA, an Environmental Impact Report is required, and at least one year has expired since the Regional Water Board assumed lead agency responsibility; or
- The Regional Water Board is a responsible agency for CEQA and at least 90 days have expired since certification or approval of environmental documentation by the lead agency.

#### **4. Filing and Annual Fees**

The State Water Board has developed fee schedules to implement the annual WDR fee law (CWC section 13260). These fee schedules are periodically updated. Current fee schedules can be found at <http://www.waterboards.ca.gov/resources/fees/> Filing fees equivalent to the annual fee for a facility should be submitted with the RWD or in the case of a General Order with the NOI. Prior to submittal of an RWD or NOI, it is recommended that the project proponent contact the appropriate Regional Water Board office to confirm the correct filing fee. Annual fee bills for facilities covered under WDRs are typically mailed out by the State Water Board in the fall for the current fiscal year (July 1<sup>st</sup> to June 30<sup>th</sup>).

#### **5. Dairy Manure Digester and Co-Digester Facilities**

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has developed a waste discharge regulatory program to specifically regulate the discharge of liquid and solid digestate from dairy manure digester and co-digester (i.e., that use manure plus other organic feedstocks) facilities within its jurisdictional boundaries. The program was developed in part to reduce permitting times for dairy manure digesters and co-digester facilities in the Central Valley of California.

The Central Valley Water Board certified the Program Environmental Impact Report (EIR) for the waste discharge regulatory program for dairy manure digester and co-digester facilities at its December 2010 meeting. The EIR provides a programmatic analysis of the environmental impacts of the development of dairy manure digester and co-digester facilities. Under the waste discharge regulatory program, the Central Valley Water Board may adopt General Orders, Individual WDRs, and Conditional Waivers.

Two General Orders have been adopted by the Central Valley Water Board under the program:

- The Waste Discharge Requirements General Order for Dairies with Manure Anaerobic Digester or Co-digester Facilities (Dairy Digester General Order) is applicable to discharges of dairy and dairy manure digester or co-digester waste from dairy facilities with anaerobic digesters or co-digesters.
- The Waste Discharge Requirements General Order for Centralized Dairy Manure Anaerobic Digester or Centralized Dairy Manure Co-digester Facilities (Centralized Dairy Digester General Order) is applicable to centralized dairy manure anaerobic digesters or centralized dairy manure co-digesters not situated on an operating dairy.

Both General Orders can be found in Portable Document Format (PDF at [http://www.waterboards.ca.gov/centralvalley/water\\_issues/dairies/dairy\\_program\\_regs\\_requirements/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/dairy_program_regs_requirements/index.shtml)) under the heading “Waste Discharge Regulatory Program for Dairy Manure Digester and Co-Digester Facilities.” The NOI for seeking coverage can be found in Attachment A of both general orders.

Under the waste discharge regulatory program, dairies covered under Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order No. R5-2007-0035 (Dairy General Order) that add a manure only digester using only manure generated by the onsite dairy herd may remain under the Dairy General Order. However, the Central Valley Water Board retains the authority under the program to require an operational dairy covered under the Dairy General Order to obtain coverage under additional permits (e.g., a dairy digester GO or individual WDRs).

Individual WDRs would need to be prepared under the waste discharge regulatory program if a dairy manure digester facility in the Central Valley does not qualify for the Dairy General Order or does not qualify for coverage under either the Dairy Digester General Order or Centralized Dairy Digester General Order. In these cases where a dairy manure digester facility is not eligible for coverage under a General Order, submittal of a complete RWD would be required to provide Central Valley Water Board staff sufficient information to draft individual WDRs.

Anyone with questions regarding the permitting of dairy manure digesters in Fresno, Kern, Kings, Madera, Mariposa, and Tulare counties should contact David Sholes at (559) 445-6279 or via email at [dsholes@waterboards.ca.gov](mailto:dsholes@waterboards.ca.gov)

Anyone with questions regarding the permitting of dairy manure digesters in Butte, Lassen, Modoc, Plumas, Tehama, and Shasta counties should contact Ben Letton at (530) 224-4129 or via email at [bletton@waterboards.ca.gov](mailto:bletton@waterboards.ca.gov)

Anyone with questions regarding the permitting of dairy manure digesters in all Glenn, Merced, Sacramento, San Joaquin, Stanislaus, Placer, Solano, Yolo, and Yuba counties should contact Charlene Herbst at (916) 464-4724 or via email at [cherbst@waterboards.ca.gov](mailto:cherbst@waterboards.ca.gov)

## 6. Stormwater Permitting

Storm water discharges from dairies to waters of the United States or tributaries thereto are permitted under the General Industrial Permit (National Pollutant Discharge Elimination System General Permit [NPDES] for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, Order No. 97-03-DWQ, NPDES Permit No. CAS000001).

While coverage under the General Industrial Permit is not specifically required for digesters and co-digesters, coverage under the Construction General Permit (NPDES General Permit for Storm Water Discharges Associate with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002) may be required if construction of a digester project will disturb more than one acre.

Before construction begins, the discharger needs to determine if the Construction General Permit applies to the project. If the Construction General Permit applies, the discharger should seek coverage under the Construction General Permit. The permit can be found at [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml) Frequently asked questions with regard to obtaining coverage under the permit can be found at [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/gen\\_const\\_faq.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/gen_const_faq.shtml)

## Section VI: California Department of Resources Recycling and Recovery Permitting Process and Requirements

California Department of Resources Recycling and Recovery (CalRecycle)  
Permitting Requirements for Anaerobic Digesters

### 1. OVERVIEW OF CALRECYCLE ROLE

The California Department of Resources Recycling and Recovery (CalRecycle) is under the umbrella of the California Natural Resources Agency. The mission of CalRecycle is to implement the mandates of the Integrated Waste Management Act of 1989. As part of its role, CalRecycle is responsible for the regulatory oversight and permitting of solid waste activities within the State of California. These include solid waste handling, processing and disposal activities such as operation of landfills, transfer-processing stations, material recovery facilities, compost facilities and waste to energy facilities.

Although CalRecycle is responsible for approving permits, each permit is processed by a Local Enforcement Agency (LEA). The LEA is the primary contact for the regulation of solid waste handling, processing or disposal activities, including permitting requirements. To determine whether a permit is required for any proposed facility, each potential operator should **contact the appropriate county LEA and work with them directly regarding the applicability of regulatory requirements.** These local enforcement agencies are certified by CalRecycle. Visit the LEA Directory, where a search can be conducted by county, at:

<http://www.calrecycle.ca.gov/LEA/Directory/>

A program EIR for Anaerobic Digestion was certified by CalRecycle on June 22, 2011. The Program EIR assesses the environmental effects that may result from the development of anaerobic digestion facilities in California. The Program EIR is available to lead agencies developing CEQA documentation relative to proposed Anaerobic Digestion projects. To obtain access to these documents visit:

<http://www.calrecycle.ca.gov/SWFacilities/Compostables/AnaerobicDig/default.htm>

### 2. REGULATORY STRUCTURE FOR ANAEROBIC DIGESTERS

Anaerobic Digestion fits within the composting regulations of Title 14 of the California Code of Regulations (14 CCR) as stated in CalRecycle's "How Anaerobic Digestion Fits Current Board Regulatory Structure". September 2009.

<http://www.calrecycle.ca.gov/Publications/Organics/2009021.pdf>

Anaerobic Digestion projects which do not qualify as compostable materials handling facilities shall be regulated as transfer processing operations and facilities.

Within the regulations, exemptions to the permitting process may apply. The LEA, with assistance from CalRecycle, will be able to determine whether these exemptions apply. Exemptions include but may not be limited to (per 14 CCR §17855(a)(1)&(4):

1. An activity is excluded if it handles agricultural material derived from an agricultural site, and returns a similar amount of the material produced to that same agricultural site, or an agricultural site owned or leased by the owner, parent, or subsidiary of the composting activity. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.
2. Handling of green material, feedstock, additives, amendments, compost, or chipped and ground material is an excluded activity if 500 cubic yards or less is on-site at any one time, the compostable materials are generated on-site and if no more than 1,000 cubic yards of materials are either sold or given away annually. The compostable material may also include up to 10% food material by volume.

#### Regulatory definitions

<b>Anaerobic Decomposition:</b>	The biological decomposition of organic substances in the absence of oxygen.
<b>Compost:</b>	The product resulting from the controlled biological decomposition of organic material. Compost feedstock materials include landscape trimmings, agricultural crop residues, paper pulp, food scrap, wood chips, manure and bio-solids.
<b>Composting:</b>	The biological decomposition process of organic materials such as leaves, grass clippings, brush, and food waste into a soil amendment.
<b>Conversion technology:</b>	Term used for the technologies that convert unwanted organic materials into high-value products such as energy, alternative fuels, solvents, and other products.
<b>Transfer/ Processing Facility:</b>	Those activities which receive, handle, separate, convert or otherwise process materials in solid waste and/or transfer solid waste directly from one container to another or from one vehicle to another for transport and/or store solid waste.

To view CalRecycle regulations in their entirety, please visit:

<http://www.calrecycle.ca.gov/Laws/Regulations/>

Please note CalRecycle regulations pertaining to composting and transfer/processing are currently being viewed to integrate anaerobic digestion activities.

The CalRecycle website has several tools for assisting an operator with the solid waste facilities permitting process. For assistance related to composting activities that may apply to anaerobic digestion, visit:

<http://www.calrecycle.ca.gov/SWFacilities/Permitting/FacilityType/Compost/>

For assistance related to transfer/processing station activities that may apply to anaerobic digestion, visit:

<http://www.calrecycle.ca.gov/SWFacilities/Permitting/FacilityType/Transfer/>

For more information on CalRecycle's function in permitting solid waste facilities, or to speak to CalRecycle staff, a list of CalRecycle staff contacts by county jurisdiction is available at:

<http://www.calrecycle.ca.gov/LEA/CountyAssign.asp>

### **3. OVERVIEW OF PERMITTING PROCESS**

1. Contact the applicable LEA to determine whether an approval and/or permit is required.
  - a. The operator should consult with the LEA before:
    - i. Any proposed operation commences to determine applicable permitting requirements;
    - ii. Implementing any changes in design or operation of any existing operation that is currently exempt;
    - iii. Implementing any changes in design or operation of any existing facility that is under "Notification" or has a Solid Waste Facilities Permit (SWFP).
2. Should the LEA determine that an approval is required:
  - a. There are several tiers available for regulation of anaerobic digestion activities, most commonly, an Enforcement Agency (EA) Notification and a full Solid Waste Facilities Permit.
    - i. The operator should consult with the LEA to determine which tier is applicable for the facility.
    - ii. To view a chart to determine tiers, visit:
    - iii. <http://www.calrecycle.ca.gov/LEA/Regs/Tiered/TierChart.htm>

#### **3. Process**

- a. For EA Notification visit:  
<http://www.calrecycle.ca.gov/SWFacilities/Permitting/PermitType/Notification/#processing>

For a full SWFP visit:

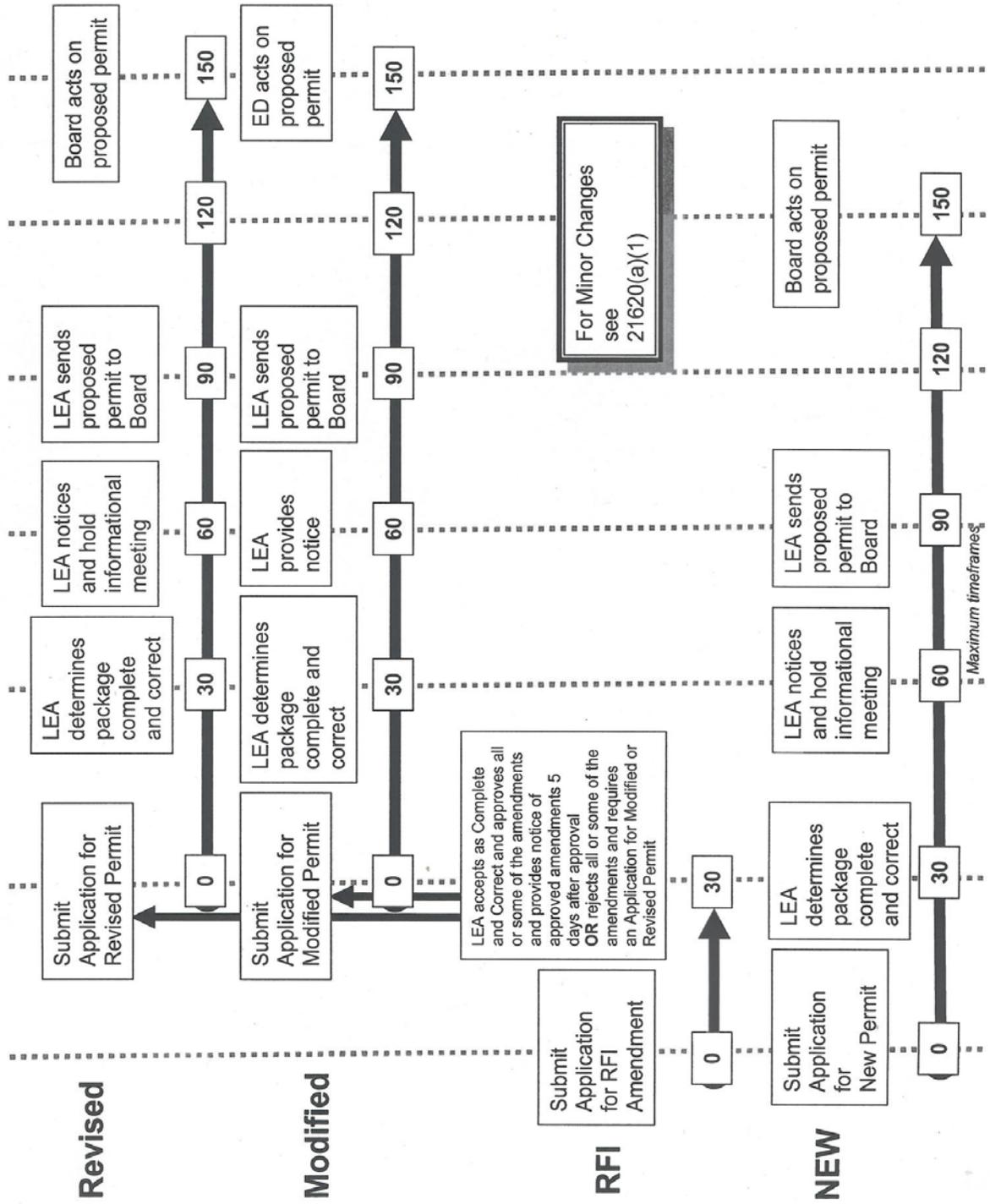
<http://www.calrecycle.ca.gov/SWFacilities/Permitting/permittype/fullpermit/>

- b. There is a 150 day time limit for the permit process once an Application has been received by the LEA and the LEA deems it "complete and correct".
  - i. Laundry List for "Complete and Correctness"
    1. Application form

2. Report of Facility Information (RFI). This may in the form of a Report of Composting Site Information (RCSI) or a Transfer/Processing Report (TPR).
3. CEQA compliance.
4. Conformance Finding Information.
5. Land Use Permit and/or Conditional Use Permit.
6. Owner/Operator Certification.
7. Permit Review Report.
8. Public Comments.
9. RWQCB Information.
10. LEA Certification and CEQA Finding.
  - ii. There are exemptions and time extensions to the 150 day rule. Consult with the LEA for more information.
- c. Operation is allowed to commence once the appropriate documentation has been submitted and/or a permit has been issued by CalRecycle.
- d. Some conditions may apply and inspections by the LEA and CalRecycle may occur. Consult the LEA for more information.

The LEA and CalRecycle are here to provide support and assistance. Please contact either agency with any concerns or questions from the lists provided above.

# PROCESSING PERMIT APPLICATION FLOW CHART



## **Section VII: City/County Permitting Process and Requirements**

### **1. Overview**

Local government requirements by cities and counties throughout California can vary significantly, so no attempt is made here to provide comprehensive information regarding these requirements. In general, the two most common types of permits that maybe required by local governments include Conditional Use Permits (CUP) and Building Permits. However, a project proponent should consult with the appropriate local agency to determine what, if any, requirements apply to a specific project. A list of County contacts can be found at the following website:

As examples of what might be expected from local agencies, information for Fresno County and San Luis Obispo County are provided.

### **2. Fresno County**

Fresno County adopted a Dairy Ordinance on October 23, 2007. As a point of information, digesters are not required to be part of new Dairy Operations pursuant to the County's adopted Dairy Ordinance, but digesters are also not explicitly accommodated. As such, the County administers proposed digesters as the following:

- Digesters are incidental to existing dairies, in most cases; and therefore, do not require a Conditional Use Permit (CUP) if the materials necessary for the digester process are produced on-site and if all associated improvements associated with the digester facility (i.e. pipelines) are located on-site.
- If the materials necessary for the digester process are produced off-site, an Unclassified Conditional Use Permit will be required under Section 853 B.20 (Solid Waste Processing).
- If the pipeline or other related improvements are to be located off-site, an Unclassified Conditional Use Permit will be required under Section 853 B.11 (Oil and Gas Development Uses).

Digester proposals associated with new dairy proposals will be evaluated with the Director Review and Approval (DRA) or CUP for the dairy proposal. Off-site piping will have to be

addressed through the Unclassified Conditional Use Permit process (the DRA or CUP for the dairy proposal should be upgraded to an Unclassified Conditional Use Permit).

The County has processed four CUP applications proposing digesters which were approved by the Planning Commission on January 24, 2008. Below is a link to the staff reports and exhibits. [http://www2.co.fresno.ca.us/4510/4360/updates/prior\\_plancom/2008/2008-01-24.pdf](http://www2.co.fresno.ca.us/4510/4360/updates/prior_plancom/2008/2008-01-24.pdf)

The processing of digester operations is a recent development, so we do not have extensive data or contacts regarding these uses.

Will Kettler  
Principal Planner  
Fresno County Department of Public Works and Planning -  
Development Services Division  
(559) 262-4110 (office)  
(559) 262-4893 (fax)  
[wkettler@co.fresno.ca.us](mailto:wkettler@co.fresno.ca.us)

### **3. San Luis Obispo County**

San Luis Obispo County has a number of policies and procedures that address and support renewable energy projects, including facilities that would propose to use anaerobic digestion to produce energy. Adopted policies in the County General Plan can be found posted on the department's website at:

[http://www.slocounty.ca.gov/planning/General\\_Plan\\_Ordinances\\_and\\_Elements/Elements.htm](http://www.slocounty.ca.gov/planning/General_Plan_Ordinances_and_Elements/Elements.htm)

Specifically, you may want to be sure to look at the Energy Element in Chapter 4, pages 4-13-4-23.

Electric generating facilities are allowable in rural areas where a dairy would normally be located, subject to the review and approval of a discretionary land use permit by the County.

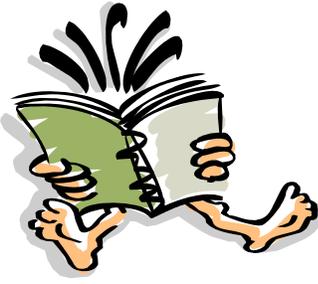
Permitting costs and time frames of the review process will vary significantly based upon the size and location of the proposed facility and would likely take at least six months and up to one year or more to complete processing. The initial application fee for the land use permit is approximately \$6,000, although total processing costs could be much more depending upon the environmental review and public hearing process. A general description of how a land use permit is processed can be found in the document below, titled SLO Co Unique System, specifically in the section, "What are the steps in the process?" Detailed electric generating standards from the Land Use Ordinance is also found below.

For further information, please contact:

John Euphrat, AICP  
Division Manager  
Dept. of Planning & Building  
San Luis Obispo County  
[www.slocounty.ca.gov/planning.htm](http://www.slocounty.ca.gov/planning.htm)  
805 781-5194

## THE COUNTY'S UNIQUE SYSTEM

### The Land Use Element and Land Use Ordinance



This is your guide to the county Land Use Element (LUE) and Land Use Ordinance (LUO), and how they each affect land development and building projects in the unincorporated areas of the county. It is divided into two sections: an introduction which explains how county regulations apply to land use, and step-by-step instructions for using the LUE/LUO system.

### Land Development in the County

Understanding the county's land use regulations is important to anyone who is considering a development project, large or small, anywhere in the unincorporated area (those parts of the county that are not within official city limits) of San Luis Obispo county. Land use regulations provide guidelines and standards for many important aspects of community development, including:

- how and where communities grow;
- how a particular property can be used;
- the permit procedures and regulations that must be followed to develop a site.

There are four documents that contain these regulations:

1. The Land Use Element (LUE) - Inland and Coastal\*\*
2. The Land Use Ordinance (LUO) - Inland and Coastal\*\*
3. The Real Property Division Ordinance
4. The Building and Construction Ordinance

\*\*The Coastal Zone refers to property located along California's coastline created by the California Coastal Act enacted in 1976 by the California Legislature.

### Land Use Element (LUE)

All land is included in one of 13 land use categories (zoning) that are established in the Land Use Element.

The 13 land use categories are:

- |                                 |                               |
|---------------------------------|-------------------------------|
| AG - Agriculture                | CR - Commercial Retail        |
| RL - Rural Lands                | O & P - Office & Professional |
| RR - Residential Rural          | CS - Commercial Service       |
| RS - Residential Suburban       | IND - Industrial              |
| RSF - Residential Single Family | REC - Recreation              |
| RMF - Residential Multi-Family  | OS - Open Space               |
| PF - Public Facilities          |                               |

The LUE also describes “combining designations”, or overlay categories that identify those areas where unusual or dangerous conditions exist. For example, floodplains, fault zones, airport approaches, or other conditions may require additional consideration when development is planned for a particular site. Combining designations are applied in addition to a particular land use category.

The nine combining designations are:

AR - Airport Review	H - Historic Site
EX - Energy/Extractive Area	EX1 - Extractive Resource Area
GSA - Geologic Study Area	SRA - Sensitive Resource Area
FH - Flood Hazard	TDCS - TDC -Sending Site
TRCR - TDC Receiving Site	

Three components of the LUE:

1. The Official Maps
2. Framework for Planning
3. The Area Plans

.....are used to determine the type and scope of development.

The fourth:

4. Coastal Plan Policies

.....is an additional set of policies only used for development within the Coastal Zone.

The **Official Maps** illustrate the official and exact location of land use categories and combining designations.

The **Framework for Planning**:

- defines planning goals
- provides a comprehensive overview of land use policies
- designates the intensity and distribution of public and private land uses including,
- housing, commercial, industry, education and public facilities
- sets guidelines for general plan amendments

The **Coastal Zone Framework for Planning**:

- contains all of the above and also includes “Coastal Table O”, a listing of the land uses allowed within each land use category.

There are 15 different **Area Plans**, each providing land use policies, programs and unofficial maps detailing land use categories and combining designations, that apply to a specific geographical area.

The 15 Area Plans are:

- Adelaida
- El Pomar-Estrella
- Estero
- Huasna-Lopez
- Las Pilitas
- Los Padres
- Nacimiento
- North Coast
- Salinas River
- San Luis Bay
- San Luis Bay (Coastal)
- San Luis Obispo
- Shandon-Carrizo
- South County
- South County (Coastal)

The Coastal Zone Area Plans contain *planning area standards* that reflect unique development considerations for a particular area.

### **Land Use Ordinance (LUO)**

The reason that you are unlikely to see a concrete batch plant next to your house is because of the regulations contained in the LUO. The LUO describes where different land uses can be established through Table 2-2 (the allowable use table) in the Inland areas of the county (those areas outside of the Coastal Zone). Table 2-2 is a listing of the land uses allowed within each land use category.

The LUO also lists the standards (requirements) and the permit procedures for land development, including features of site design such as minimum parcel size, required width of yards (setbacks), allowed building heights, number and design of off-street parking spaces, and standards for grading, drainage, curb and gutter improvements and tree removal.

The LUO also includes inland *planning area standards* that reflect unique development considerations for a particular area.

## **Coastal Zone Land Use Ordinance (CZLUO)**

The CZLUO does not contain the allowable use table nor the planning area standards as these are found in Coastal Framework for Planning and the Coastal Area Plans. It does contain all the other sections that the LUO contains.

## **Real Property Division Ordinance (Title 21)**

Standards and procedures for dividing land, lot line adjustments and certificates of compliance are contained in Title 21. This guide does not include instructions for using this document. For more information on land divisions, please refer to the information bulletin “Guide to Land Divisions.”

## **Building and Construction Ordinance (Title 19)**

Technical code requirements for building construction are contained within Title 19, in conjunction with the Uniform Building Code, Uniform Plumbing Code, Uniform Mechanical Code, etc. This guide does not include instructions for using this ordinance and the various codes. For more information on building and construction, please refer to the information bulletin “Guide to Construction Permits.”

## **Permits**



The Department of Planning and Building issues two permit types. Construction Permits and Land Use Permits.

### **Construction Permits**

Construction permits are required so the county can ensure new structures are safe and built to county standards. They include building, grading, electrical, plumbing and mechanical permits.

In most instances, a construction permit is not an application that the Community Advisory Council will review since this stage is ministerial (if the application meets legal requirements, we ***must*** issue a permit) and there is no referral or consultation process with the Advisory Council. If a hearing has previously been required because the project required a land use permit or a land division and the Council has participated, you may want to request that your liaison provides status checks on the progress of the related building permits. In addition, construction plans are available for public review.

## Land Use Permits

There are four kinds of land use permits:

Plot Plan

Site Plan Review (Inland only)

Minor Use Permit

Conditional Use Permit (Inland only) / Development Plan (Coastal Zone only)

**Plot Plan approval**, required for simple development projects, is given by the Planning Director through the planning department staff.

**Site Plan Review approval**, required to review more project details, such as landscaping or signage, is given by the Planning Director through the department staff.

**Minor Use Permit approval**, required for projects that may have the potential to cause neighborhood concerns, is given by the Hearing Officer (the Planning Director or his designee).

**Development Plan or Conditional Use Permit approval**, required for larger projects or other land uses that may have the potential to affect the neighborhood or community, is granted by the Planning Commission.

Plot Plan and Site Plan decisions are appealable to the Planning Commission. Minor Use Permit, Conditional Use Permit and Development Plan decisions are appealable to the Board of Supervisors.

In addition there are other types of approvals that are associated with land use including:

**Variance**; a request by an applicant who wants relief from specific standards that can only be waived or modified through finding the property different from all other property in the area.

**Waivers and Adjustments**; are used to waive or modify ordinance standards as provided in the ordinances.

## What are the steps in the process?

Pre Application Meeting - A meeting with staff, and staff from other departments to initially review the proposed development of the property.

File Application - Submittal of the application materials that are required or identified as needed. During the first 10 days after application submittal, a copy of the project is referred to applicable agencies including the Community Advisory Council in the area.

Completeness Determination - Within 30 days of submittal (as required by state law), staff completes the initial review of the project. The site is viewed and a letter sent to the applicant requesting additional information if needed.

Application Accepted - Once the application is complete, a letter formally accepting the application is sent. This action starts the time clock for processing.

Environmental Review - The application will be subject to an environmental review to determine if significant environmental impacts could result for the proposed project.

Public Notice - This step provides a notice to the newspaper and to properties within a minimum of 300 feet from the boundaries of the project. This notice must be in the newspaper a minimum of 10 to 30 days before the hearing depending upon the type of environmental review.

Staff Report to the Decision-Maker - A report is prepared by Department staff that documents all the policies, facts and recommendations from other agencies (including the Community Advisory Councils) that led to the recommendation on the project. This will include the environmental determination, findings for the decision and the recommended conditions of approval.

Decision - The Review Authority (Staff, Hearing Officer, Subdivision Review Board, or Planning Commission) considers all the information that is provided at the hearing including the staff report, information the applicant provides, and comments from the public, the Community Advisory Council and individual community members.

Appeal - Decisions on land use and associated permits may be appealed. A new public hearing will be held by the applicable hearing body.

### **How long does the process take?**

Processing times vary depending upon the site, and the complexity and environmental impacts associated with the project.

In most cases, from the time an application is submitted, a land use permit that requires a public hearing takes approximately 4 to 8 months to process. A Plot Plan is generally approved simultaneously with the construction permit. A Site Plan takes about two to six months. A land division application that requires a public hearing takes approximately six to ten months to process. A lot line adjustment takes about four to seven months.

### **How do Community Advisory Councils participate?**

There are several points at which the Community Advisory Council can participate in the process, including:

Before the application is submitted - The Planning Department often tells applicants as part of pre-application meetings to go to the Community Advisory Council in the area before the project

is submitted. This is often a way to get early input, even before a project has completed its design and can most easily be changed based on comments from the community. This is a voluntary process and may not occur on all projects.

Application referral - During the first review of the application, the department sends a project referral to the Community Advisory Council for the area. This is a good time to try to work with the applicant to see if they can modify the project to meet the concerns of the community.

Environmental Review - The environmental review is looking at potential impacts that could occur from the project. The Community Advisory Council can submit comments or information that you want the department to consider during this stage of project review. You can also submit comments on the proposed environmental documents (such as the Negative Declaration) or appeal the determination that was made using the “Request for Review” procedure.

Public Hearing - During the public hearing that occurs before the decision-makers, the Community Advisory Council can submit additional letters on the project. If these are received prior to the staff report being completed, they will be included in the staff report. In addition, members of the Community Advisory Council can attend and participate in the public hearing.

Appeal - If the Community Advisory Council does not agree with the decision, you can appeal most decisions to the Board of Supervisors.

## **CHAPTER 22.32 - ELECTRIC GENERATING PLANTS**

### **Sections:**

- 22.32.010 - Purpose
- 22.32.020 - Permit and Application Requirements
- 22.32.030 - Development Standards
- 22.32.040 - Steam Electric Generating Facilities
- 22.32.050 - Wind Energy Conversion Facilities (WECF)
- 22.32.060 - Photovoltaic Generating Facilities
- 22.32.070 - Hydro-Electric Generating Facilities
- 22.32.080 - Co-Generation Facilities

### **22.32.010 - Purpose**

This Chapter provides standards to mitigate the potential adverse effects of various types of electric generating plants.

### **22.32.020 - Permit and Application Requirements**

The following permit and application requirements apply to all electric generating facilities, except where other provisions of this Chapter establish different requirements.

**A. Permit requirements.** Except where county land use permit authority is preempted by state law, and except where other provisions of this Chapter establish a different permit requirement, the required land use permit is determined by the area in square feet per site of grading or the removal of natural ground cover, as follows:

#### **Permit Requirement Area of Site Disturbance**

Zoning Clearance Less than 40,000 sf

Minor Use Permit 40,000 sf or more

**B. Application contents.** In addition to any specific requirements later in this Section, land use permit applications shall comply with the requirements of Chapter 22.62 (Permit Applications) and shall also describe:

1. The physical and operating characteristics of the facility; the proposed design capacity of the facility; the operating schedule; how the electric energy shall be used; and if any electric energy shall leave the site, the physical and contractual arrangement for tying-in to other facilities;

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Electric Generating Plants 22.32.030

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2. Alternatives to the proposed facility and to separable aspects of the proposal. This will include reliability, as well as economic and environmental advantages and disadvantages;

3. Plans for any overhead or underground transmission lines, transformers, inverters, switchyards or any required new or upgraded off-site transmission facilities; and

4. The number and characterization by trades of the estimated construction and operation force. If construction is estimated to take over six months, the construction workforce will be estimated for each six-month period and will include estimates of numbers of locally hired employees and employees who will move into the area, and a discussion of

the estimated impact that employees moving into the area will have on housing, schools and traffic.

**C. Approvals from other agencies.** If another public agency must approve the proposed facility, the applicant shall:

1. Describe the requirements of that agency; summarize the agency's procedures for acting on the proposed use, and describe the studies, analyses and other data collection which the applicant or agency will perform in order to resolve each substantive requirement of the agency.
2. List the required actions related to the proposed facility by other public agencies and utilities and a schedule for application and approval of those actions.
3. Provide a copy of necessary state and federal permits and all written comments and decisions made by officials of the agencies listed prior to the start of construction.

**D. Information from other applications.** An applicant may incorporate by reference any information developed or submitted in any other application for the project, provided the applicant submits a copy or summary of the referenced material, identifies the permitting process in which it was submitted and the outcome of that permitting process, and explains the relevance of the information to the approval standards of this Title.  
[Added 1989, Ord. 2409] [22.08.312]

#### **22.32.030 - Development Standards**

**A. Bonding.** Following permit approval and prior to any work on the proposed site, the applicant shall post a surety bond in favor of the County, conditioned on conformance with all applicable conditions, restrictions, and requirements of this Title and any conditions required by the permit. Such guarantee is in addition to any bond required by the state. The total value of this bond will be established through the Conditional Use Permit review and approval process, and will be administered in compliance with Section 22.64.040.

SAN LUIS OBISPO COUNTY CODE - TITLE 22, LAND USE ORDINANCE  
Electric Generating Plants 22.32.040

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**B. Environmental quality assurance.** An Environmental Quality Assurance Program covering all aspects of construction and operation shall be submitted prior to construction of any project component. This program will include a schedule and plan for monitoring and demonstrating compliance with all requirements of the Conditional Use Permit. Specific requirements of this Environmental Quality Assurance Program will be determined during the environmental review process and Conditional Use Permit review and approval process.

**C. Clearing and revegetation.** The land area exposed and the vegetation removed during construction shall be the minimum necessary to install and operate the facility. Topsoil must be stripped and stored separately. Disturbed areas no longer required for

operation will be regraded, covered with topsoil and replanted during the next appropriate season.

**D. Utility interconnect.** All distribution lines, electrical substations, and other interconnection facilities shall be constructed to the specifications of the utility. A statement from the utility confirming that the proposed interconnection is acceptable shall be filed with the County building inspector prior to the issuance of any building permit. Interconnection shall conform to procedures and standards established by the California Public Utilities Commission.

**E. Other requirements.** Development standards in addition to those specified in this Section and in this Chapter may be imposed through conditions of approval where Minor Use Permit or Conditional Use Permit approval is required.  
[Added 1989, Ord. 2409] [22.08.313]

## Section VIII: Utility Connection Requirements

This section describes utility-specific requirements for the development of biogas projects.

Regardless of the utility from which the project will receive service, please note that it takes considerable time to construct and start-up a new electric interconnection or gas point of receipt. Therefore, please involve your utility representative early in your project development and planning.

### **1. Pacific Gas & Electric Company (PG&E)**

#### A. Service Territory:

- i. PG&E's natural gas service territory and general requirements can be found at [http://www.pge.com/tariffs/tm2/pdf/GAS\\_PRELIM\\_A.pdf](http://www.pge.com/tariffs/tm2/pdf/GAS_PRELIM_A.pdf)
- ii. PG&E's electric service territory and general requirements can be found at [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_PRELIM\\_A.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_PRELIM_A.pdf)

#### B. Biogas-to-Pipeline Injection Interconnections:

- i. Biogas Project Contact:
  1. Ken Brennan, Senior Product Manager in Gas Business Development, can be reached by phone at 415-973-0017 or by email at [kjbh@pge.com](mailto:kjbh@pge.com)
- ii. Responsibilities: The biogas supplier is responsible for:
  - a. All costs of developing the biogas-to-pipeline injection project.
  - b. All facilities required to compress Gas Rule 21.C (Quality of Gas) compliant gas into the point of interconnection into PG&E's gas transmission pipeline system, which is considered to be at PG&E's metering facilities. PG&E will own and operate any installed metering equipment and the pipeline interconnection point regardless of whether PG&E receives cost reimbursement from the supplier for these facilities.
  - c. Processing biogas as necessary to meet current gas quality specifications at the time and point of delivery.
  - d. Transporting the biogas to the PG&E interconnection point.
  - e. Providing compression at a delivery pressure sufficient for the biomethane to enter the PG&E system without exceeding the specified maximum allowable operating pressure of PG&E' facilities.
  - f. Executing and performing pursuant to PG&E's CPUC-authorized California Biogas Interconnection and Operating Agreement (not available online), and the supplier's gas purchase contract with PG&E, if any.
- iii. Pipeline Gas Quality Requirements
  1. The supplier is responsible for processing biogas as necessary to meet current gas quality specifications for gas delivered into PG&E's gas transmission pipeline system, which can be found in PG&E's Gas Rule 21 at [http://www.pge.com/tariffs/tm2/pdf/GAS\\_RULES\\_21.pdf](http://www.pge.com/tariffs/tm2/pdf/GAS_RULES_21.pdf) Section C, Quality of Gas.
  2. Gas Rule 21 is a "living document" that contains a list of PG&E' current basic gas quality specifications, which are subject to changes approved by the CPUC.

The biogas project may be required to adhere to additional gas quality requirements as determined by PG&E whether or not these requirements are specifically detailed in Gas Rule 21.

- iv. Establishing Gas and/or Electric Service
  - 1. To apply for new gas or electric service, a gas or electric line relocation, a change in existing service, or temporary power for your project, you may contact PG&E by one of the following means.
    - a. Complete an application for service online at <http://www.pge.com/mybusiness/customerservice/otherrequests/newconstruction/process/>
    - b. Download and print the application from the list on the website under “Brochures and Forms”, complete it, and send it back to PG&E at PO Box 28949, Fresno, CA 93729-8949
    - c. Contact PG&E’s New Construction Service Center 877-743-7782 to have your application taken over the phone.
  - 2. The service application process involves six steps, as outlined in the link above
    - a. Complete an application for new service
    - b. Attend a field meeting
    - c. Engineering phase
    - d. Billing, contracts and rights-of-way
    - e. Construction
    - f. Setting the gas or electric meters
- v. Once the project build-out is completed and the electrical work is finalized, PG&E will test the quality of the biogas. If the quality of gas as it runs through the completed project systems meets Gas Rule 21.C, the biogas-to-pipeline injection project is considered to be online and the gas can flow.

C. On-site Generation Projects:

- i. Project Contact: To initiate an onsite generation project, the customer should email PG&E at [gen@pge.com](mailto:gen@pge.com) or contact PG&E’s Generation Interconnection Services hotline at 415-972-5676 and leave a message for a project manager to make contact. The project manager can assist in outlining the options for the customer, and provide the appropriate documents or links to access the application/forms that need completion.
- ii. The general process includes the following (the process is a bit more detailed; this is very high level, and your PG&E representative can describe the full process):
  - 1. PG&E will review the application, drawings, and other information. The project may go through one or more levels of review, during which PG&E engineering will review it from a connection and system protection standpoint.
  - 2. PG&E will advise you if infrastructure or other specific upgrades are necessary. We will prepare an interconnection agreement that outlines the responsibilities of both parties, and complete other agreements as required for the specific situation.
  - 3. Once the project is built and tested, PG&E engineers and system testing personnel review test reports from a third party tester. A final test is then scheduled during which PG&E will witness commission testing by the third party tester.

4. Approval to interconnect will then be granted. The developer can then request payment of any incentives sought, and start service under NEMBIO or start delivering power under the Power Purchase Agreement (PPA) option, if applicable.
- iii. There are two tariff options for exporting power to PG&E.
    1. Small Renewable Generator PPA (Electric Schedule E-SRG)
      - a. The PPA tariff can be found at [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_SCHEDS\\_E-SRG.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_E-SRG.pdf)
      - b. Information and FAQs regarding the PPA can be found at <http://www.pge.com/b2b/energysupply/wholesaleelectricssolicitation/standardcontractsforpurchase/> or by calling the PPA hotline at 415-972-5676.
      - c. To get started, the customer should go to the PG&E website to download the tariff and contract at <http://www.pge.com/b2b/energysupply/wholesaleelectricssolicitation/standardcontractsforpurchase/>
      - d. The customer should access and complete the interconnection application (see Attachment E) at this link: <http://www.pge.com/includes/docs/pdfs/b2b/newgenerator/wholesalegenerator/wdt.pdf>
      - e. Note that if the project developer receives benefits under SGIP as described below, he is not eligible to participate in the Small Renewable Generator PPA.
    2. Net Energy Metering Service For Biogas Customer-Generator (Electric Schedule NEMBIO)
      - a. The NEMBIO tariff can be found at [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_SCHEDS\\_NEMBIO.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_NEMBIO.pdf)
  - iv. Self-Generation Incentive Program (SGIP):
    1. Note that if a project receives benefits under SGIP, it is not eligible to participate in the Small Renewable Generator PPA as described above.

## **2. Sacramento Municipal Utility District (SMUD)**

SMUD's distribution service territory covers most of Sacramento County and a small part of Placer County. A Generating Facility Interconnection Application can be downloaded at: <http://www.smud.org/business/rates-requirements/rules-pdfs/ia.pdf>

## **3. San Diego Gas & Electric**

Self-Generation Incentive Program (SGIP) Projects: The California Center for Sustainable Energy (CCSE) is the Program Administrator for SGIP projects in SDG&E's territory. Information can be obtained online at <http://www.sdenergy.org/>.

Fuel Cell Projects: Fuel cell projects qualify for benefits under SGIP. For more information contact CCSE at 858-244-1177 (local) or 866-SDENERGY (866-733-6374) (toll-free).

## **4. Southern California Edison**

Preliminary Statement, Territory Served:  
<http://www.sce.com/NR/sc3/tm2/pdf/ce05-12.pdf>

Index of Communities:  
<http://www.sce.com/NR/sc3/tm2/pdf/ce62-12.pdf>

## **5. Southern California Gas Company (SoCalGas)**

- D. Service Territory: A list of cities and communities in the SoCalGas natural gas service territory can be found at <http://www.socalgas.com/service/cities.pdf>. A description and maps of the SoCalGas customer service franchise territories are also provided at <http://www.socalgas.com/regulatory/tariffs/tariffs-maps.shtml>
- E. Biogas-to-Pipeline Injection Interconnections:
- i. Biogas Project Contact: Ty Korenwinder can be reached by phone at 559-739-2307 or by email at [tkorenwinder@semprautilities.com](mailto:tkorenwinder@semprautilities.com)
  - ii. Access to the SoCalGas Pipeline System
    1. SoCalGas is an open access system for suppliers wanting access to market their pipeline quality natural gas to the marketplace. SoCalGas' Tariff Rule 39 and the associated interconnection and operational balancing agreements, govern the procedures and standards for a supplier to interconnect and deliver gas into the SoCalGas system.
    2. Rule 39, Access to the SoCalGas Pipeline System, is available at <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/39.pdf>
    3. Generally, the Supplier / Interconnector is responsible for:
      - a. Processing the gas as necessary to meet the quality specifications at the time and point of delivery.
      - b. Bringing the gas to the SoCalGas interconnection point.
      - c. Providing gas at a delivery pressure sufficient to enter the SoCalGas system without exceeding the specified maximum allowable operating pressure of SoCalGas' facilities.
      - d. Making a written request, including providing the necessary information, and funding of an interconnection capacity study.
      - e. Executing and performing pursuant to California Public Utilities Commission (CPUC)-authorized interconnection and operational balancing agreements.
      - f. Demonstrating creditworthiness for the imbalance risk and operation and maintenance fees.
  - iii. Required Agreements
    1. Interconnection: <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/IA.pdf>

2. Interconnect Collectible System Upgrade:  
<http://www.socalgas.com/regulatory/tariffs/tm2/pdf/ICSUA.pdf>
  3. Operational Imbalances:  
<http://www.socalgas.com/regulatory/tariffs/tm2/pdf/OBA.pdf>
- iv. Pipeline Gas Quality Requirements
1. The supplier is responsible for processing the gas as necessary to meet the then-current gas quality specifications.
  2. SoCalGas' gas quality specifications for gas delivered into the system are detailed in Rule 30, Transportation of Customer-Owned Gas,  
<http://www.socalgas.com/regulatory/tariffs/tm2/pdf/30.pdf>, Section I, Gas Delivery Specifications.
  3. Rule 30 contains a list of SoCalGas' current basic gas quality specifications, which are subject to changes approved by the CPUC.  
The California Air Resources Board (CARB) also has specifications for Compressed Natural Gas (CNG) vehicles that need to be considered. The CARB CNG specifications are defined in the California Code of Regulations Title 13, Division 3, Chapter 5, Article 3, and Section 2292.5 at  
<http://www.oal.ca.gov/ccr.htm>  
To access this link; click on "Ca. Code Regulations" under Sponsored Links on the left side of the page, then on the next page click on the link "Search for a Specific Regulatory Section", and then enter 13 in the Title box and 2292.5 in the Section box, and finally click on the number 1 in blue next to the name of the regulation, and then the specific regulation will open..
- v. Firm Access Rights
1. After an Interconnector's deliveries are made into the SoCalGas system, access rights to the Citygate are governed by SoCalGas' Tariff Schedule No. G-RPA at  
<http://www.socalgas.com/regulatory/tariffs/tm2/pdf/G-RPA.pdf>
  2. The available receipt point capacity applicable to an individual Interconnector may be affected by physical flows from other points of receipt (producers and non-producer), physical pipeline capacities, and storage operating conditions for that day, and daily end-use demand on the SoCalGas system. Determination of whose gas flows where there are limitations downstream of Interconnectors will be governed by the contracted access rights. Your SoCalGas representative will be available to assist you in determining the best way to get your supplies to the marketplace.
- vi. Creditworthiness
1. A supplier must demonstrate creditworthiness or post security equal to the maximum nomination amount allowed times the credit exposure period times the \$/MMBtu plus the monthly O&M Fee and for any utility provided subsidy.

vii. Getting Started

1. SoCalGas Interconnection Capacity Study – SoCalGas must perform a study to determine the possibility of an interconnection at the desired injection point, and the likely impact resulting on the operation of the pipeline at that point.
  - a. The first step towards establishing a SoCalGas pipeline interconnection is to contact your SoCalGas representative, and make a written request for access. That request will need to include where and when the new supply will be delivered to SoCalGas and the volume expected to be delivered into the SoCalGas system.
  - b. Required Documents
    - i. The Interconnector must execute either a SoCalGas Consulting Services Agreement (Form 6440) at <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/CSA.pdf> or a Collectible System Upgrade Agreement (Form 6420) at <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/Access-Collectib.pdf> and
    - ii. Confidentiality Agreement (Form 6410) at <http://www.socalgas.com/regulatory/tariffs/tm2/pdf/Access-Confiden.pdf>
    - iii. Prior to any work being completed, the Interconnector must provide payment equal to the estimated cost of the Interconnection Capacity Study prior to SoCalGas proceeding with the Interconnection Capacity Study.
2. The electrical work for the biogas project will be handled either by Pacific Gas and Electric Company (PG&E) or by Southern California Edison (SCE) depending on the location of the project. Please contact your PG&E or SCE account representative as soon as possible to initiate the electric work for your project.

F. Self-Generation Projects: Depending on the location of the project, please contact either your PG&E or SCE account representative.

G. Fuel Cell Projects: Depending on the location of the project, please contact either your PG&E or SCE account representative.

# Section IX: California Environmental Quality Act (CEQA) Requirements

## 1. General Requirements

# CEQA

The California Environmental Quality Act

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- The basic goal of the California Environmental Quality Act (CEQA) ([Pub. Res. Code §21000 et seq.](#)) is to develop and maintain a high-quality environment now and in the future, while the specific goals of CEQA are for California's public agencies to:
  - 1) identify the significant environmental effects of their actions; and, either
  - 2) avoid those significant environmental effects, where feasible; or
  - 3) mitigate those significant environmental effects, where feasible.
- CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies.

["Projects"](#) are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps.
- Where a project requires approvals from more than one public agency, CEQA requires ones of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by CEQA. The most basic steps of the environmental review process are:

- 1) Determine if the activity is a ["project"](#) subject to CEQA;
- 2) Determine if the "project" is [exempt](#) from CEQA;
- 3) Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:



- a) Negative Declaration if it finds no "significant" impacts;
- b) Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
- c) Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects in [Article 5](#).

The purpose of an EIR is to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to list ways which the significant environmental effects may be minimized and indicate alternatives to the project.

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Both the [CEQA Statute](#) and [CEQA Guidelines](#) are available on-line. Print copies are available to the public in all county libraries, as well as some colleges and university libraries, in the government publications section.

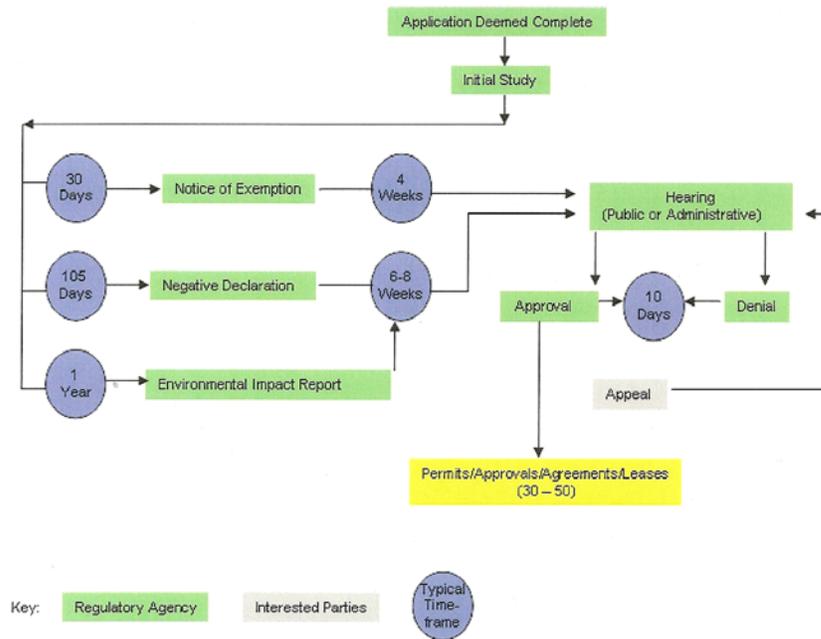
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| [CERES](#) | [CEQA Home](#) | [CEQA Statute](#) | [Wetlands](#) | [LUPIN](#) |

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Document URL: [http://ceres.ca.gov/topic/env\\_law/ceqa/summary.html](http://ceres.ca.gov/topic/env_law/ceqa/summary.html)  
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## 2. Typical Permitting Process (Environmental Review)



Source: California Energy Commission 2007

The timeline for environmental review (Figure 6) is based on schedules required under state law, mainly the CEQA guidelines and the Permit Streamlining Act (PSA). The guidelines are regulations adopted by the California Resources Agency that provide detailed procedures that agencies follow to implement CEQA. The PSA requires government agencies to complete EIR preparation within one year of accepting a complete project application and to render their decisions on the permit application within 180 days of certification of the EIR. A lead agency, according to CEQA, is responsible for preparing the EIR.

Note that issuance of permits, approvals, and other regulatory authorizations occur after certification of the EIR. The schedules and timeframes for obtaining these permits are not depicted on Figure 6 but can take longer than 180 days under certain circumstances. Usually the lead agencies will approve their permits before responsible or trustee agencies approve or issue their authorizations.

### 3. CEQA Checklist for Project Developers

Compliance with CEQA is the responsibility of the Lead Agency, either State or Local. “Lead Agency” is defined as; “the public agency which has the principal responsibility for carrying out or approving a project. The Lead Agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared.” (California Code of Regulations, Title 14, Section 15367).

The criteria for determining “Lead Agency” can be found at:

[http://ceres.ca.gov/topic/env\\_law/ceqa/guidelines/art4.html](http://ceres.ca.gov/topic/env_law/ceqa/guidelines/art4.html)

As described previously in this section, CEQA compliance involves the preparation of either; (1) Notice of Exemption (NOE), (2) Negative Declaration, or (3) Environmental Impact Report (EIR). Public agencies normally do NOEs and often do Negative Declarations. However, EIRs are almost always contracted out, and the agencies’ role is to direct, manage, review, and approve. By law, the agencies are allowed to collect their costs to comply with CEQA. In general, the developers of projects are responsible to provide information necessary for the CEQA compliance (especially information specific to their project) and to pay for any costs incurred by the agency in order to comply. The project developer may also be required to implement and pay for any mitigation measures that may be required in order to approve the project. The amount of involvement by the project developer and the cost will vary based upon the extent of compliance needed and the complexity of the project. The main steps involving the project developer are as follows:

- ✓ Inquire and determine with the County, Regional Water Board, or Air District as to who will be the Lead Agency.
- ✓ Meet with the Lead Agency and provide them with information and plans for the project; provide follow up details as necessary for the Lead Agency to determine what level of CEQA compliance will be required.
- ✓ If the project is determined to be Exempt, then the extent of participation by the project developer will be limited (provision of limited information and possibly payment of filing fee cost).
- ✓ If the project requires an Initial Study to determine if an EIR is necessary, the project developer will be required to provide additional details about the project and perhaps assist in collection of general environmental information which will be used to determine if there is a chance that the project may cause significant environmental impacts.
- ✓ If after completion of the Initial Study, the agency determines by analysis that there is no potential for significant environmental impacts, the agency will prepare a Negative Declaration. The project developer will be responsible to pay any costs incurred by the agency to conduct the Initial Study and complete/file the Negative Declaration.

- ✓ If the agency determines that a Negative Declaration can only be achieved through imposition of specific mitigation measures, a Negative Declaration with Mitigation Measures will be filed. In addition to the costs for the Initial Study and Negative Declaration, the project developer may also be responsible to implement and pay for any mitigation measures that are required to approve the project.
- ✓ If, as a result of analysis of the Initial Study, the agency determines that the project has the potential to cause significant environmental impacts, then the agency will be required to conduct an EIR. The project developer will be responsible to provide any additional necessary information, including possible special/additional studies, and to pay for the cost of preparation of the EIR. The project developer may or may not be asked to help identify a contractor to prepare the EIR, but the agency will make the decision as to the chosen contractor.
- ✓ The project developer will participate and assist in providing pertinent information during the EIR process for steps that include, but are not limited to; EIR public and agencies' scoping meeting, contractor-agency meetings during preparation of the EIR, and public meeting for the Draft EIR.
- ✓ The project developer will pay for all costs to complete and file the final certified EIR and to implement and pay for any mitigation measures required to approve the project.

## Section X: Financing and Funding Opportunities

This section of the manual gives an overview of federal, state and private financing and funding opportunities currently available for the development of anaerobic dairy digesters and co-digesters in California. These opportunities include programs that provide incentives such as low interest loans, loan guarantees, grants and tax incentives. The information contained in this section reflects the status of financing and funding opportunities as of June 2011. Contacts and web links to more detailed information about these financing and funding opportunities are provided for each program. Due to constant changes in financing and funding opportunities, it is recommended that interested parties contact funding agencies to ensure that project design and goals are appropriate for the financing or funding program.

The majority of the financing and funding opportunities referenced in this section were provided by the United States Environmental Protection Agency's (EPA) AgSTAR Partnership Program<sup>1</sup> and the National Center for Appropriate Technology's National Sustainable Agriculture Information Service (ATTRA)<sup>2</sup>. The AgSTAR Funding Database and ATTRA project are dynamic web resources that are automatically updated and expanded as new programs become available.

### **1. FEDERAL FINANCING AND FUNDING OPPORTUNITIES**

#### **Bioenergy Program for Advanced Biofuels**

State/Federal	US/Federal
Type	Grant
Area of Interest	Biofuels
Description	<p>The Bioenergy Program for Advanced Biofuels was authorized under Section 9005 of the Farm Bill. The program provides payments to eligible producers to expand production of advanced biofuels. Payments will be made to eligible biofuel producers for the production of fuel derived from renewable biomass, other than corn kernel starch, which includes biofuel derived from waste materials such as animal waste, crop residue, other vegetative waste material, food waste, and yard waste.</p> <p>The amount of each payment will depend on the number of producers participating in the program, the amount of advanced biofuels being produced, and the amount of funds available.</p>
Eligible Organizations	Agricultural, Nonprofit, Local Government, State Government
How to Apply	Application materials may be obtained by contacting the USDA, Rural Development State Office, Renewable Energy Coordinator. Submit applications to the Rural Development

<sup>1</sup> Available on the World Wide Web at: <http://www.epa.gov/agstar/tools/funding/index.html>

<sup>2</sup> Available on the World Wide Web at: [https://attra.ncat.org/attra-pub/farm\\_energy/biomass.html#general](https://attra.ncat.org/attra-pub/farm_energy/biomass.html#general)

	State Office in the State in which the applicant's principal office is located.
For More Information	<a href="http://www.rurdev.usda.gov/BCP_Biofuels.html">http://www.rurdev.usda.gov/BCP_Biofuels.html</a>
Primary Contact	Business-Cooperative Programs USDA-Rural Development 1400 Independence Avenue S.W. Washington, DC, 20250-1750 <a href="mailto:bpinfo@wdc.usda.gov">bpinfo@wdc.usda.gov</a>

### **Business and Industry Guaranteed Loan Program**

State/Federal	US/Federal
Type	Loan Guarantee
Area of Interest	Renewable Energy
Description	<p>Administered by the U.S. Department of Agriculture (USDA) Rural Development, the Business and Industry Guaranteed Loan Program is designed to help develop or finance business, industry, and employment and improve the economic and environmental climate in rural communities. This program provides guarantees up to 80 percent of a loan made by a commercial lender. Loan proceeds may be used for a number of items, including working capital, machinery and equipment, buildings, and real estate.</p> <p>A borrower must be engaged or proposes to engage in a business that will (1) provide employment; (2) improve the economic or environment climate; (3) promote the conservation, development, and use of water for aquaculture; or (4) reduce reliance on nonrenewable energy sources.</p>
Eligible Organizations	All
How to Apply	The entity must first find a bank or lending institution willing to extend a loan subject to a guarantee. The bank then makes a joint application with the borrower to the USDA state or district office of Rural Development. Applications are accepted on an ongoing basis.
For More Information	<a href="http://www.rurdev.usda.gov/rbs/busp/b&amp;i_gar.htm">http://www.rurdev.usda.gov/rbs/busp/b&amp;i_gar.htm</a>
Primary Contact	Carolyn Parker USDA-Rural Development 1400 Independence Avenue S.W. Washington DC, 20250-1750 (202) 690-4109 <a href="mailto:Carolyn.Parker@usda.gov">Carolyn.Parker@usda.gov</a>

### Business Energy Investment Tax Credit

State/Federal	US/Federal
Type	Tax Credit
Area of Interest	Renewable Energy
Description	The American Recovery and Reinvestment Act of 2009 modified Section 48 of the U.S. tax code to allow owners of production tax credit-eligible renewable projects, such as anaerobic digestion energy projects, to make an irrevocable election to earn a one-time corporate investment tax credit (ITC) in lieu of claiming the production tax credit. The ITC is equal to 30 percent of the costs attributable to the facility, which typically excludes other project costs, such as transmission equipment or ancillary site improvements.
Eligible Organizations	Livestock Producer, Commercial/Industrial Business, Small Business
How to Apply	To apply for the tax credit, a business must complete Form 3468, 'Investment Credit.'
For More Information	<a href="http://www.irs.gov/">http://www.irs.gov/</a>
Primary Contact	Public Information Specialist U.S. Internal Revenue Service 1111 Constitution Ave., NW Washington, DC 20224 (202) 622-3980

### Clean Renewable Energy Bonds

State/Federal	US/Federal
Type	Bond
Area of Interest	Renewable Energy
Description	Clean renewable energy bonds (CREBs) may be used by certain entities, such electric cooperatives, government entities, and public power producers, to finance renewable energy projects. The borrower pays back only the principal of the CREB, and the bondholder receives federal tax credits in lieu of interest.  The Internal Revenue Service (IRS) has determined that facilities "functionally related and subordinate" to the generation facility itself are also eligible for CREB financing. Examples of these auxiliary components include transmission lines and interconnection upgrades.
Eligible Organizations	Electric Cooperatives, Government Entities, Public Power Producers
How to Apply	Participation in the program is limited by the volume of bonds allocated by Congress for the program. Participants must first apply to the IRS for a CREBs allocation. The IRS typically issues solicitations to the program in late spring.
For More Information	<a href="http://www.irs.gov/">http://www.irs.gov/</a>

Primary Contact	Zoran Stojanovic Internal Revenue Service 1111 Constitution Ave., NW Washington, DC 20224 (202) 622-3980
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**Conservation Innovation Grants (under EQIP)**

State/Federal	US/Federal
Type	Grant
Area of Interest	Conservation
Description	<p>The U.S. Department of Agriculture (USDA) Natural Resources Conservation Services administers Conservation Innovation Grants (CIG). This voluntary program is intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production. CIG was authorized as part of the Environmental Quality Incentives Program (EQIP).</p> <p>CIG is not a research program but rather a tool to stimulate the adoption of conservation approaches or technologies that have been studied sufficiently to indicate a high likelihood of success, and are likely candidates for eventual technology transfer. CIG will fund projects targeting innovative on-the-ground conservation, including pilot projects and field demonstrations. Technologies and approaches that are commonly used in the project's geographic area, and which are eligible for funding through EQIP, are not eligible for funding through CIG.</p> <p>CIG funds pilot projects and conservation field trials that can last from one to three years. Grants for approved projects cannot exceed 50 percent of the total project cost. The federal contribution for a single project cannot exceed \$1 million.</p>
Eligible Organizations	Livestock Producer, Local Government, State Government, Nonprofit
How to Apply	CIG typically offers two competitions annually--one at the national level and another at the state. USDA issues the national solicitation, while each state announces their program separately.
For More Information	<a href="http://www.nrcs.usda.gov/programs/cig/">http://www.nrcs.usda.gov/programs/cig/</a>
Primary Contact	Gregorio Cruz USDA-Natural Resources Conservation Service PO Box 2890, Room 5239-S Washington, DC 20013-2890 (202) 720-8071 <a href="mailto:gregorio.cruz@wdc.usda.gov">gregorio.cruz@wdc.usda.gov</a>

**Conservation Loan Program**

State/Federal	US/Federal
Type	Loans
Area of Interest	Conservation
Description	<p>The Conservation Loan (CL) Program provides farm owners and farm-related business operators access to credit to implement conservation techniques that will conserve natural resources. CL funds can be used to implement conservation practices approved by the Natural Resources Conservation Service (NRCS) including manure management systems, anaerobic digesters, and other emerging or existing conservation practices, techniques, or technologies.</p> <p>Direct CLs can be obtained through local Farm Service Agency (FSA) offices with loan limits up to \$300,000. Guaranteed CLs up to \$1,119,000 are available from lenders working with FSA. These limits vary annually.</p>
Eligible Organizations	Agricultural
How to Apply	Additional information may be obtained at local FSA offices at <a href="http://www.fsa.usda.gov/FSA/">http://www.fsa.usda.gov/FSA/</a>
For More Information	<a href="http://www.fsa.usda.gov/FSA/">http://www.fsa.usda.gov/FSA/</a>
Primary Contact	<p>Farm Service Agency          USDA - Farm Service Agency          1400 Independence Ave., S.W.          STOP 0506          Washington, DC 20250</p>

**Environmental Quality Incentives Program (EQIP)**

State/Federal	US/Federal
Type	Grant and Production Incentive
Area of Interest	Agriculture
Description	<p>The Environmental Quality Incentives Program (EQIP) offers financial and technical help to assist eligible participants install or implement structural and management practices to improve environmental quality on agricultural lands. State conservationists have discretion over the allocation of the funding within their areas. Workgroups, convened by the local Soil and Water Conservation Districts, identify the specific resource concerns to be addressed, set priority area goals, select cost-share practices, establish ranking criteria for evaluating applications, and set their own schedule for approving applications.</p> <p>EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices, up to a maximum of 10 years. These contracts provide incentive</p>

	<p>payments and cost-share grants to implement conservation practices. EQIP may cost-share up to 75 percent of the costs of certain conservation practices. Limited resource producers and beginning farmers and ranchers may be eligible for cost-shares up to 90 percent.</p> <p>Farmers and ranchers may elect to use a certified third-party provider for technical assistance. An individual or entity may not receive, directly or indirectly, cost-share or incentive payments that, in the aggregate, exceed \$450,000 for all EQIP contracts entered during the term of the Farm Bill.</p>
Eligible Organizations	Livestock Producer
How to Apply	Application process varies from state to state, but applications are typically accepted on an ongoing basis
For More Information	<a href="http://www.nrcs.usda.gov/programs/eqip">http://www.nrcs.usda.gov/programs/eqip</a>
Primary Contact	<p>Alan Forkey          USDA, Natural Resources Conservation Service          Financial Assistance Programs Division          14th and Independence Ave., SW          Room 5239-S          Washington, DC 20250          (202) 690-2621  <a href="mailto:alan.forkey@ca.usda.gov">alan.forkey@ca.usda.gov</a></p>
Regional Contacts	<p>Bakersfield; Carolyn Lofreso, 661-336-0967          Elk Grove; Dan Tavener 916-714-1104          Fresno; Dave Durham 559-276-7494          Hanford; Vince Moreno 559-584-9209          Madera; Rob Roy 559-674-4628          Merced; Malia Hildebrandt 209-722-4119          Modesto; Christopher Hartley 209-491-9320          Stockton; Dave Simpson 209-427-7127          Visalia; Mark Davis 559-734-8732</p>

### Federal Renewable Electricity Production Tax Credit

State/Federal	US/Federal
Type	Tax Credit
Area of Interest	Renewable Energy
Description	<p>The federal Renewable Electricity Production Tax Credit (PTC) is a per kilowatt-hour tax credit for electricity generated by qualified energy resources and sold by the taxpayer to an unrelated person during the taxable year. One of those qualifying sources is open loop biomass, which the U.S. Internal Revenue Services defines as including any agricultural livestock manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposition of manure. Open loop biomass projects can receive a 1.1 cent per kilowatt-hour production tax credit.</p> <p>A qualified facility is one that was originally placed in service after October 22, 2004, and before December 31, 2013, and has a nameplate capacity rating which is not less than 150 kilowatts. A taxpayer may generally claim a credit during the 10-year period commencing with the date the qualified facility is placed in service. The tax credit is reduced for projects that receive other federal tax credits, grants, tax-exempt financing, or subsidized energy financing.</p>
Eligible Organizations	Livestock Producer, Commercial/Industrial
How to Apply	The tax credit is summarized in Section 45 of the Internal Revenue Code. A business can take the credit by completing Form 8835, "Renewable Electricity Production Credit," and Form 3800, "General Business Credit."
For More Information	<a href="http://www.irs.gov/irb/2006-42_IRB/ar07.html">http://www.irs.gov/irb/2006-42_IRB/ar07.html</a>
Primary Contact	Public Information - IRS U.S. Internal Revenue Service 1111 Constitution Ave., NW Washington, DC 20224 (800) 829-1040

### MACRS Accelerated Depreciation

State/Federal	Federal
Type	Corporate Depreciation
Area of Interest	Renewable Energy Systems
Description	Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. The MACRS establishes a set of class lives for various types of property, ranging from three to 50 years, over which the property may be depreciated. A number of renewable energy technologies are classified as five-year property (26 USC § 168(e)(3)(B)(vi))

	<p>under the MACRS, which refers to 26 USC § 48(a)(3)(A), often known as the energy investment tax credit or ITC to define eligible property.</p> <p>In addition, for certain other biomass property, the MACRS property class life is seven years. Eligible biomass property generally includes assets used in the conversion of biomass to heat or to a solid, liquid or gaseous fuel, and to equipment and structures used to receive, handle, collect and process biomass in a waterwall, combustion system, or refuse-derived fuel system to create hot water, gas, steam and electricity.</p>
Eligible Organizations	Commercial, Industrial, Agricultural
How to Apply	
For More Information	<a href="http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US06F">http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US06F</a>
Primary Contact	<p>Public Information - IRS  U.S. Internal Revenue Service  1111 Constitution Avenue, N.W.  Washington, DC 20224  Phone: (800) 829-1040  Web Site: <a href="http://www.irs.gov">http://www.irs.gov</a></p>

**Public Interest Energy Research Program**

State/Federal	US/Federal
Type	Grant
Area of Interest	Renewable Energy, Agriculture
Description	<p>Value Added Producer Grants (VAPGs) provide grant funding to agricultural producers to enable economic planning and working capital activities directly related to the processing and/or marketing of value-added agricultural products, including farm-based renewable energy generated from an agricultural commodity or by-product such as an anaerobic digester. Applicants may not request funds for both planning activities and working capital expenses in one application. Eligible applicants include independent producers, farmer and rancher cooperatives, and agricultural producer groups. Based on past year solicitations, planning grants of up to \$100,000 per project were available, while working capital grants were capped at \$300,000 per project. Cost share of at least 50 percent is required. Working capital applicants need to have completed both a business plan and an independent feasibility study on their project to be eligible. Cost-share matching funds must equal or exceed the grant amount requested.</p>
Eligible Organizations	Livestock Producer, Farmer and Rancher Cooperatives, Agricultural Producer Groups

How to Apply	USDA annually publishes a Notice of Solicitation of Applications in the Federal Register requesting applications for the current funding cycle. Contact a State Rural Development Office to obtain additional information and assistance. The contact information for these offices can be found at <a href="http://www.rurdev.usda.gov/recd_map.html">www.rurdev.usda.gov/recd_map.html</a> . <a href="#">EXIT Disclaimer</a>
For More Information	<a href="http://www.rurdev.usda.gov/rbs/coops/vadg.htm">http://www.rurdev.usda.gov/rbs/coops/vadg.htm</a>
Primary Contact	Business-Cooperative Programs USDA-Rural Development 1400 Independence Avenue S.W. Washington, DC 20250-1750 (202) 720-7558 <a href="mailto:cpgrants@wdc.usda.gov">cpgrants@wdc.usda.gov</a>

### Qualified Energy Conservation Bonds

State/Federal	US/Federal
Type	Bond
Area of Interest	Renewable Energy in Rural Areas
Description	Qualified Energy Conservation Bonds (QECBs) may be used by state, local, and tribal governments to finance electricity generation from renewable resources in rural areas. The borrower pays back only the principal of the QECB, and the bondholder receives federal tax credits in lieu of interest. QECB allocations can be used for qualified projects with at least 70 percent of money received to be allocated for public projects and 30 percent allowable for private use (capital expenditures only).
Eligible Organizations	State, Local, and Tribal governments
How to Apply	The Internal Revenue Service allocates the bond volume to each state based on the state's population. Each state has its own process for reallocating the bonds within the state. Many states solicit applications for bonding authority in the Fall.
For More Information	<a href="http://www.irs.gov/">http://www.irs.gov/</a>
Primary Contact	Timothy Jones Internal Revenue Service 1111 Constitution Ave., NW Washington, DC 20224 (202) 622-3980

### Renewable Energy Production Incentive (REPI)

State/Federal	US/Federal
Type	Incentive Payments
Area of Interest	Renewable Energy Production Facilities
Description	<p>The Renewable Energy Production Incentive (REPI) is managed by the U.S. Department of Energy and provides financial incentive payments for electricity generated and sold by new qualifying renewable energy generation facilities. Qualifying facilities are eligible for annual incentive payments of 1.5 cents per kilowatt-hour (1993 dollars and indexed for inflation) for the first 10-year period of their operation, subject to the availability of annual appropriations in each Federal fiscal year of operation.</p> <p>REPI is part of an integrated strategy in the 2005 Energy Policy Act to promote increases in the generation and utilization of electricity from renewable energy sources and to promote market utilization of renewable energy technologies.</p>
Eligible Organizations	Not-for-profit electrical cooperatives; public utilities; state governments; commonwealths; territories of the United States, the District of Columbia, Indian tribal governments, or a political subdivision within Native Corporations that sell the facility's electricity.
How to Apply	<a href="http://apps1.eere.energy.gov/repi/how_to_apply.cfm">http://apps1.eere.energy.gov/repi/how_to_apply.cfm</a>
For More Information	<a href="http://www.eere.energy.gov/repi/">www.eere.energy.gov/repi/</a>
Primary Contact	GO REPI Coordinator US Department of Energy 1617 Cole Blvd Golden, CO 80401 <a href="mailto:gorepi@go.doe.gov">gorepi@go.doe.gov</a>

### Rural Energy for America Program (REAP)

State/Federal	US/Federal
Type	Loan, Grant
Area of Interest	Renewable Energy, Agriculture
Description	<p>This program replaces Section 9006 of the 2002 Farm Bill which provided loans, loan guarantees, and grants to purchase renewable energy systems and make energy efficiency improvements. Energy efficiency projects typically involve installing or upgrading equipment resulting in a significant reduction in energy use from current operations. REAP grants can provide up to 25 percent of a proposed project's cost, and can also provide a loan guarantee for the full project cost of up to \$25 million. The combined amount of a grant and loan guarantee may not exceed 75 percent of the cost of the project. Feasibility studies are now eligible for grants that can cover up to 25 percent of the study's cost.</p>

Eligible Organizations	Livestock Producer, Educational Institution, Local Government, Nonprofit, Utility, Small Business, State Government
How to Apply	Congress has extended funding for this program through fiscal year 2012. Applications are submitted to the USDA Rural Development State Office in the state where the project is located. A list of the USDA Rural Development State Offices and Energy Coordinators addresses and telephone numbers can be found at the website below.
For More Information	<a href="http://www.rurdev.usda.gov/rbs/farbill/index.html">http://www.rurdev.usda.gov/rbs/farbill/index.html</a>
Primary Contact	Rural Business - Cooperative Service USDA Room 5803 South Building, Mail Stop 3201 1400 Independence Avenue, S.W. Washington, DC 20250-3201 (202) 690-4730 <a href="mailto:webmaster@rurdev.usda.gov">webmaster@rurdev.usda.gov</a>

### **Section 1603 Cash Grants for Renewable Energy**

State/Federal	US/Federal
Type	Grant
Area of Interest	Renewable Energy
Description	The American Recovery and Reinvestment Act of 2009 created a grant program for taxpayers eligible for the business energy investment tax credit. A facility owner can choose to receive a one-time grant equal to 30 percent of the construction and installation costs for the facility, as long as the facility is depreciable or amortizable. Eligible projects include anaerobic digesters, landfill gas, solar, and wind. The facility must be placed in service in 2009, 2010, or 2011 or construction must begin in any of those years and be completed prior to the end of 2014.
Eligible Organizations	Commercial, Industrial, Agricultural
How to Apply	The grant application deadline is October 1, 2012. Fill out the application found at <a href="http://www.treasury.gov/initiatives/recovery/Documents/Application.pdf">http://www.treasury.gov/initiatives/recovery/Documents/Application.pdf</a>
For More Information	<a href="http://www.treasury.gov/initiatives/recovery/pages/1603.aspx">http://www.treasury.gov/initiatives/recovery/pages/1603.aspx</a>
Primary Contact	Grant Information U.S. Department of Treasury 1500 Pennsylvania Avenue, NW Washington, DC, 20220 <a href="mailto:1603Questions@do.treas.gov">1603Questions@do.treas.gov</a>

### **Sustainable Agriculture Research and Education (SARE)**

State/Federal	US/Federal
Type	Grant
Area of Interest	Agriculture
Description	<p>The U.S. Department of Agriculture National Institute of Food and Agriculture sponsors this grant program with the goal of assisting farmers in adopting sustainable agricultural practices to improve profits, protect the environment, and enhance quality of life. Grants are available in the following areas:</p> <p>Research and Education Grants range from \$100,000 to \$300,000 to fund projects that usually involve scientists, producers, and others in an interdisciplinary approach. Professional Development Grants are designed to educate extension staff and other agriculture professionals about sustainable concepts and practices. Producer Grants target funding of between \$1,000 and \$15,000 to support farmers and ranchers in conducting research, undertaking marketing and demonstration projects, and to share results. Regional SARE programs may offer other types of grants.</p>
Eligible Organizations	Livestock Producer
How to Apply	The SARE program works primarily through competitive grants that are administered by four regions, each with its own requests for proposals and application deadlines.
For More Information	<a href="http://www.sare.org/grants/index.htm">http://www.sare.org/grants/index.htm</a>
Primary Contact	<p>Rob Hedberg  USDA  Stop 2223  1400 Independence Ave. SW  Washington, D.C. 20250-2223  (202) 720-5384  <a href="mailto:rhedberg@nifa.usda.gov">rhedberg@nifa.usda.gov</a></p>

### Value-Added Producer Grants

State/Federal	US/Federal
Type	Grant
Area of Interest	Renewable Energy, Agriculture
Description	Value Added Producer Grants (VAPGs) provide grant funding to agricultural producers to enable economic planning and working capital activities directly related to the processing and/or marketing of value-added agricultural products, including farm-based renewable energy generated from an agricultural commodity or by-product such as an anaerobic digester. Applicants may not request funds for both planning activities and working capital expenses in one application. Eligible applicants include independent producers, farmer and rancher cooperatives, and agricultural producer groups. Based on past year solicitations, planning grants of up to \$100,000 per project were available, while working capital grants were capped at \$300,000 per project. Cost share of at least 50 percent is required. Working capital applicants need to have completed both a business plan and an independent feasibility study on their project to be eligible. Cost-share matching funds must equal or exceed the grant amount requested.
Eligible Organizations	Livestock Producer, Farmer and Rancher Cooperatives, Agricultural Producer Groups
How to Apply	USDA annually publishes a Notice of Solicitation of Applications in the Federal Register requesting applications for the current funding cycle. Contact a State Rural Development Office to obtain additional information and assistance. The contact information for these offices can be found at <a href="http://www.rurdev.usda.gov/recd_map.html">www.rurdev.usda.gov/recd_map.html</a> . <a href="#">EXIT Disclaimer</a>
For More Information	<a href="http://www.rurdev.usda.gov/rbs/coops/vadg.htm">http://www.rurdev.usda.gov/rbs/coops/vadg.htm</a>
Primary Contact	Business-Cooperative Programs USDA-Rural Development 1400 Independence Avenue S.W. Washington, DC 20250-1750 (202) 720-7558 <a href="mailto:cpgrants@wdc.usda.gov">cpgrants@wdc.usda.gov</a>

## 2. CALIFORNIA FINANCING AND FUNDING OPPORTUNITIES

### **California Energy Commission**

State/Federal	California
Type	Loan
Area of Interest	Energy Efficiency
Description	This program is for agriculture and food processing industries, with the utilization of food and animal waste for bio-energy generation as eligible projects. Energy generation including renewable energy projects and cogeneration are eligible.
Eligible Organizations	Financing covers Public Schools and Colleges, Cities, Counties, Special Districts, Public Hospitals and Public Care Institutions.
How to Apply	<a href="http://energy.ca.gov/efficiency/financing/index.html#application">http://energy.ca.gov/efficiency/financing/index.html#application</a>
For More Information	<a href="http://energy.ca.gov/efficiency/financing/index.html#terms">http://energy.ca.gov/efficiency/financing/index.html#terms</a>
Primary Contact	Special Projects Office (916) 654-4104 <a href="mailto:pubprog@energy.state.ca.us">pubprog@energy.state.ca.us</a>

### **California Pollution Control Financing Authority**

State/Federal	California
Type	Bond
Area of Interest	Pollution Control
Description	<p>The <b>Pollution Control Tax-Exempt Bond Financing Program</b> provides private activity tax-exempt bond financing to California businesses for the acquisition, construction, or installation of qualified pollution control, waste disposal, waste recovery facilities, and the acquisition and installation of new equipment.</p> <p>Financing is performed in conjunction with allocation from the California Debt Limit Allocation Committee (CDLAC). California receives allocation pursuant to a formula in federal tax law. This allocation is controlled by CDLAC. In 2008, the allocation available for all private activity purposes in California (including housing, industrial development, waste/recycling and others) was slightly over \$3 billion.</p> <p>Tax-exempt bond financing provides qualified borrowers with lower interest costs than are available through conventional financing mechanisms.</p>
Eligible Organizations	<p>Large Business: Provides financing to California business, irrespective of company size, for the acquisition, construction or installation or qualified pollution control, waste disposal, and resource recovery facilities</p> <p>Small Business: Provides financing to California businesses that meet the size standards set forth in Title 13 of the Code of</p>

	Federal Regulations or are an eligible small business, which is defined as 500 employees or less, including affiliates, for the acquisition, construction or installation of qualified pollution control, waste disposal, and resource recovery facilities.
How to Apply	Financing is performed in conjunction with allocation from the <a href="#">California Debt Limit Allocation Committee</a> (CDLAC). The allocation is required by federal tax law for private activity tax-exempt bonds to be issued.
For More Information	<a href="http://www.treasurer.ca.gov/cpcf/bondfinancing.asp">http://www.treasurer.ca.gov/cpcf/bondfinancing.asp</a>
Primary Contact	Doreen Smith Program Manager (916) 654-5610 dsmith@treasurer.ca.gov

### **Public Interest Energy Research Program**

State/Federal	California
Type	Grant
Area of Interest	Renewable Energy, Energy Efficiency
Description	<p>Administered by the California Energy Commission the Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by delivering environmentally safe, affordable, and reliable energy services and products to the marketplace. The PIER Program awards up to \$62 million annually to support new energy services and products that create statewide environmental and economic benefits. Topic areas funded include: - Renewable Energy Technologies - Climate Change Program - Energy Innovations Small Grant Program - Energy-Related Environmental Research - Energy Systems Integration - Environmentally Preferred Advanced Generation - Industrial/Agricultural/Water End-Use Energy Efficiency - Natural Gas Research - Transportation Research</p> <p>Proposers can be located outside California, but the proposed research results must exceed current best practices or product improvement. There is no minimum or maximum requirement for the amount of funding requested, but some level of match funding is requested.</p>
Eligible Organizations	All
How to Apply	Solicitations are posted throughout the year
For More Information	<a href="http://www.energy.ca.gov/contracts/pier.html">http://www.energy.ca.gov/contracts/pier.html</a>
Primary Contact	Mark Hutchison California Energy Commission 1516 9th St. Sacramento, CA 95814 (916) 654-6718 <a href="mailto:mhutchis@energy.state.ca.us">mhutchis@energy.state.ca.us</a>

### SCE- Biomass Standard Contract

State/Federal	California
Type	Production Incentive
Area of Interest	Energy Efficiency
Description	Southern California Edison Company (SCE), an investor-owned electric utility, offers a production incentive to customers who generate electricity with eligible biomass energy systems. Separate contracts are available to facilities with capacities of less than 1 megawatt (MW), facilities greater than or equal to 1 MW but not greater than 5 MW, and systems greater than 5 MW but not greater than 20 MW. Participants will receive the rate that is available when their project comes online for the duration of their contract period.
Eligible Organizations	Livestock Producer, Commercial/Industrial Business, Small Business
How to Apply	SCE will accept proposals for the next round of financing in Summer 2011
For More Information	<a href="http://www.sce.com/EnergyProcurement/bsc.htm">http://www.sce.com/EnergyProcurement/bsc.htm</a>
Primary Contact	George Wiltsee Southern California Edison Company 2244 Walnut Grove Rosemead, CA 91770 (626) 302-4945 <a href="mailto:george.wiltsee@sce.com">george.wiltsee@sce.com</a>

### State Assistance Funds for Enterprise, Business, and Industrial Development Corporation: Energy Efficiency Improvements Loan Fund

State/Federal	California
Type	Loan
Area of Interest	Renewable Energy
Description	<p>The State Assistance Fund for Enterprise, Business, and Industrial Development Corporation (SAFE-BIDCO) administers a program, which includes provisions for low-interest loans for renewable energy systems. The costs of the design and consulting fees for an anaerobic digester, along with material and equipment costs incurred after SAFE-BIDCO's acknowledgement of the receipt of the application can be financed under the program. The maximum loan amount is \$450,000 with an interest rate set at Wall Street Journal prime, and fixed for the life of the loan. The maximum loan term is 15 years, and can sometimes be combined with other financing.</p> <p>Eligible applicants need to have a net worth of \$6 million or less and an average net income of \$2 million or less.</p>

Eligible Organizations	Nonprofit, Small Business
How to Apply	Applications are accepted on a rolling basis and are posted on the website below. A \$250 fee is required with the application and there is a 1 percent loan fee.
For More Information	<a href="http://www.safe-bidco.com/content.asp?contentid=557">http://www.safe-bidco.com/content.asp?contentid=557</a>
Primary Contact	Mary Jo Dutra SAFE-BIDCO 1377 Corporate Center Parkway, Suite A Santa Rosa, CA 95407-5432 (800) 273-8637 <a href="mailto:s-b@safe-bidco.com">s-b@safe-bidco.com</a>

### **3. CALIFORNIA UTILITIES FINANCING AND FUNDING OPPORTUNITIES**

#### **Sacramento Municipal Utility District (SMUD)**

State/Federal	Sacramento County
Type	Grant
Area of Interest	Pollution Control, Renewable Energy, Energy Efficiency
Description	<p>Electricity and Renewable Energy Credits as well as greenhouse gas emission credits from local dairy digester projects help SMUD meet its renewable energy and greenhouse gas reduction goals, and bring economic and environmental benefits to Sacramento County.</p> <p>For Sacramento County dairy farmers, SMUD can provide: 50% of the USDA grant application cost; 13% capital cost incentive to match 25% USDA Rural Development grant; Net Metering crediting all the farm meters at retail rates (about 10 cents per kilowatt-hour); Power Purchase Agreement for surplus electricity; and help with interconnection and additional grants.</p>
Eligible Organizations	Dairy owners and dairy digester vendors/developers.
How to Apply	See Primary Contacts
For More Information	See Primary Contacts
Primary Contact(s)	Marco Lemes (916) 732-5871 <a href="mailto:mlemes@smud.org">mlemes@smud.org</a>