



AGENDA:
PCAPCD Board of Directors Meeting
Thursday, December 13, 2012, 2:30 P.M.
Placer County Board of Supervisors' Chambers
175 Fulweiler Avenue, Auburn, California

Call to Order

Flag Salute

Roll Call / Determination of a Quorum

Approval of Minutes: October 11, 2012, Regular Board Meeting

Public Comment: Any person desiring to address the Board on any item not on the agenda may do so at this time. No action will be taken on any issue not currently on the agenda.

Action: Item 1 & 2

- 1. Approve a Budget Revision for the purchase of photovoltaic system:** Authorize the Air Pollution Control Officer, or his designee, to execute all necessary documents, and to take all actions to complete the purchase and installation of a solar photovoltaic system on the building housing the District offices located at 110 Maple Street, Auburn, California.
- 2. Approve a Budget Revision to support a Biomass Waste for Energy Greenhouse Gas Offset Project.** Authorize the expenditure of funds (\$60,000) to support a Biomass Waste for Energy Greenhouse Gas Offset Credit project in partnership with the University of California Berkeley Center for Forestry, Blodgett Forest Research Station.

Information: Item 3

- 3. Regulatory Measures for 2013:** Per California Health and Safety Code § 40923(a) the District shall publish a list of regulatory measures scheduled or tentatively scheduled for consideration during the following year.

Action: Item 4

- 4. Approve Resolution #12-13:** To recognize Director Peter Hill's many years of service to the citizens of Placer County and the Placer County Air Pollution Control District.

Air Pollution Control Officer Report *(Verbal reports and/or handouts will be provided)*

- a. Chair and Vice-chair for 2013
- b. Fiscal Update

Adjournment

Next Regularly Scheduled Board Meeting: Thursday, February 14, 2013 2:30 PM

Opportunity is provided for the members of the public to address the Board on items of interest to the public, which are within the jurisdiction of the Board. A member of the public wanting to comment upon an agenda item that is not a Public Hearing item should submit their name and identify the item to the Clerk of the Board.

Placer County Air Pollution Control District is committed to ensuring that persons with disabilities are provided the resources to participate fully in its public meetings. If you require disability-related modifications or accommodations, please contact the Clerk of the Board. All requests must be in writing and must be received by the Clerk five business days prior to the scheduled meeting for which you are requesting accommodation. Requests received after such time will be accommodated only if time permits.

District Office Telephone – (530) 745-2330



Board Agenda Item

Action

Agenda Date: December 13, 2012

Prepared By: Don Duffy, Associate Air Pollution Control Engineer 

Topic: Installation of Solar Photovoltaic System on the District Offices at 110 Maple Street

Action Requested:

- 1) Adopt Resolution #12-12 authorizing the Air Pollution Control Officer, or his designee, to execute all necessary documents and to take all actions to complete the purchase and installation of a solar photovoltaic system on the building located at 110 Maple Street, Auburn, California.
- 2) Approve Budget Revision #12-03 for funds to be applied to said purchase in the amount of Ninety Thousand Dollars (\$90,000).

Discussion: Since the purchase of the District office building at 110 Maple Street, it has been upgraded in a number of ways to be energy efficient and a model to the community of practical ways to be “green”. Using solar to provide a portion of the building’s electrical supply is part of the vision. In order to properly size a solar photovoltaic system a history of actual electrical use is required. Now that the District personnel have been located in the Maple Street building for over a year, the electrical use history is available.

The California Public Utilities Commission has a rebate program that is applicable to government entities that can substantially reduce the cost of installing solar. The size of the system that is eligible for the rebate is up to 30 kW AC. The District has specified a system close to the upper size limit. The rebate program is nearing its end.

Staff has consulted with two solar contracting firms recommended by the Placer County mPower staff and developed a specification for a roof-mounted system that is expected to supply over half of the annual electrical use of the building. Firm fixed price bids for a turn-key system to the specification have been solicited and received from the two contractors.

Fiscal: The low bid for installation of the solar system is \$82,377. A contingency of approximately 10% will be budgeted for any unexpected additional items associated with the project. This makes the project budget \$90,000.

Funds to pay for the installation of the solar system (\$90,000) will be authorized by Budget Revision #12-03 (Attachment #2) and will be transferred from the Settlement Fund. A sum of \$40,000 will be drawn from the Settlement Fund and the \$50,000 budgeted to be paid back to the Settlement Fund will be cancelled. The new total for the Settlement Fund will be \$1,202,500 after this action.

ATTACHMENT #1

Subject:

Resolution #12-12, Installation of Solar on 110 Maple Street



Board Resolution:
Resolution # 12-12

**Before the Placer County
Air Pollution Control District Board of Directors**

In the Matter Of: Authorizing the Air Pollution Control Officer, or His Designee, to Execute All Necessary Documents, and to Take All Actions to Complete the Purchase of Installation of a Solar Photovoltaic System on the Building Located at 110 Maple Street, Auburn, California, and to Approve a Budget Revision for Funds to be Applied to Said Purchase in the Amount of Ninety Thousand Dollars (\$90,000).

The following **RESOLUTION** was duly passed by the Placer County Air Pollution Control District Board of Directors at a regular meeting held on **December 13, 2012**, by the following vote:

- Ayes: Holmes, M. _____ Barkle _____ Nader _____ Weygandt _____ Ucovich _____
 Holmes, J. _____ Montgomery _____ Garcia _____
- Noes: Holmes, M. _____ Barkle _____ Nader _____ Weygandt _____ Ucovich _____
 Holmes, J. _____ Montgomery _____ Garcia _____
- Abstain: Holmes, M. _____ Barkle _____ Nader _____ Weygandt _____ Ucovich _____
 Holmes, J. _____ Montgomery _____ Garcia _____

Signed and approved by me after its passage:

_____ Chairperson

_____ Attest: Clerk of said Board

WHEREAS, the Placer County Air Pollution Control District is a body corporate and politic and a public agency of the state, pursuant to California Health and Safety Code Section 40700; and

WHEREAS, the Placer County Air Pollution Control District has the power to take by grant, purchase, gift, devise, or lease, to hold, use, and enjoy, and to lease or dispose of any real or personal property within or without the District necessary to the full exercise of its powers, pursuant to California Health and Safety Code Section 40701; and

WHEREAS, at the regular District Board meeting on October 11, 2012, the District Board authorized the Air Pollution Control Officer to solicit proposals from solar contractors to install a solar photovoltaic system on the roof of 110 Maple street to reduce monthly electricity bills from Pacific Gas & Electric, and;

WHEREAS, the Air Pollution Control Officer solicited and received two competitive proposals for a turn-key solar system installation in accordance with a solar specification developed by District staff.

NOW THEREFORE BE IT RESOLVED, that the Placer County Air Pollution Control District's Board of Directors hereby authorizes the Air Pollution Control Officer, on behalf of the District, to issue a purchase order for installation of a solar photovoltaic system per the solar specification.

BE IT FURTHER RESOLVED, that the Placer County Air Pollution Control District's Board of Directors does hereby authorize up to Ninety Thousand Dollars (\$90,000) for the purchase of the solar system through Budget Revision BR #12-03.

ATTACHMENT #2

Subject:

Budget Revision #12-03

PLACER COUNTY
BUDGET REVISION

PAS DOCUMENT NO.

Dept No.	Doc Type	Total \$ Amount	Total Lines
73	BR	\$ 80,000.00	2

- Cash Transfer Required
Fund 541 Subfund 160
- Reserve Cancellation Required
- Establish Reserve Required

- Auditor-Controller
- County Executive
- District Board

ESTIMATED REVENUE ADJUSTMENT								APPROPRIATION ADJUSTMENT									
Dept No.	T Code	Rev	OCA	PCA	OBJ L-3	Proj. No.	G/L Sub GL	AMOUNT	Dept No.	T Code	Rev	OCA	PCA	Obj L-3	Proj. No.	G/L Sub GL	AMOUNT
073	006		000040	01020	8954			\$40,000.00	73	014		000040	01020	4151	Solar Voltaic System		\$ 90,000.00
									73	015		000040	01020	3935	Settlement Funds		-50,000.00
TOTAL								40,000.00	TOTAL								40,000.00

REASON FOR REVISION: To appropriate from the Settlement Fund \$40,000 towards the installation of a Solar Photo Voltaic System at 110 Maple Street, Auburn, CA (APN: 002-171-030) and to cancel the budgeted payback of \$50,000 to the Settlement Fund.

Distribution:
All copies to Auditor

District APCO

APCD District Board Chairman

Auditor-Controller

Date: 12/13/2012

Page: 1

Budget Revision #12-03

ATTACHMENT #3

Subject:

Staff Report

PROPOSAL TO INSTALL SOLAR ON 110 MAPLE STREET

STAFF REPORT

Executive Summary

Since the purchase of the District office building at 110 Maple Street, it has been upgraded in a number of ways to be energy efficient and a model to the community of practical ways to be “green”. Using solar to provide a portion of the building’s electrical supply is part of the vision. In order to properly size a solar photovoltaic system, history of actual electrical use is required. Now that the District personnel have been located in the Maple Street building for over a year, the electrical use history is available.

Staff have consulted with two solar contracting firms and developed a specification for a roof-mounted system that is expected to supply over half of the annual electrical use of the building. Firm fixed price bids for a turn-key system to the specification have been solicited from the two contractors.

Staff recommends that a contract be awarded to the low-cost bidder.

Discussion

Prior to the District moving into 110 Maple Street in June, 2011, energy efficient upgrades were installed and completed beyond what was required by Title 24. An increase in energy efficiency was desired with decreased electrical and natural gas usage, a lower carbon footprint for the building, and an increase in annual energy cost savings. These upgrades were:

- Less efficient electric water heater was replaced with a tankless on demand, natural gas water heater
- Attic and ceiling insulation upgraded from R19 to R39
- HVAC unit and duct work replacement
 - o Two main units replaced with 4 smaller efficient units with economizers for a total of 6 HVAC units on the building
- Lighting upgrades, including change out of ballasts, reflectors, diffusers, and bulbs was done building-wide

Equipment	Cost	kWH Savings	Therms Savings	Annual CO2 savings (tonnes)	Annual Energy Cost Savings	Simple Payback (years)
Replacement of HVAC units	\$61,242	23,657	702	10.52	\$4,304	14.2
Interior Lighting Upgrades	\$22,895	18,715		5.40	\$2,960	7.7
Attic Insulation to R38	\$2,887	287	212	1.20	\$215	13.4
Tankless Water Heater	\$3,000	1,675		0.48	\$265	11.3
Economizers	\$3,240	4,740		1.37	\$750	4.0
Totals:	\$93,264	49,074	914	18.97	\$8,494	11.8

Installation of a solar system on the building is the next step in operating an energy efficient office building.

The California Solar Initiative is a rebate program that promotes installation of solar electric systems in the state. This rebate program is winding down and is in the last step of ten steps. The District is in the category of Government/Non-Profit where the rebate is \$0.70 per watt in step ten. As of November 15, 2012, the quantity of solar rebates remaining in the Pacific Gas & Electric service area was 68.25 megawatts. When this amount of rebates is issued, the rebate program will be over.

The rebate type most attractive to the District is the initial payment type where the rebate is paid once the system is installed and operational (called Expected Performance Based Buydown [EPBB]). This type of rebate is limited to a maximum system size 30 kW AC. For larger systems, the rebate is in the form of a 8.8 cents per kWh payment on a year-by-year payment. The District will limit the size of the system to just under 30 kW to stay in the EPBB category. At \$0.70 per watt, the rebate on a 30 kW system is \$21,000.

The building has three substantial planar roof areas suitable for mounting solar panels; one facing east, one south, and one west. The south-facing roof (front entrance) has considerable shading from trees and electrical output would be significantly degraded. The east-facing (toward Lincoln Way) and west-facing (toward old Latitudes restaurant) roof areas have little shading. The system specification requires the panels to be placed on the east and west facing roof areas.

The District has stipulated in the specification that the project be turn-key where the contractor is responsible for design, engineering, permitting, installation, regulatory inspections, PG&E coordination, and CPUC rebate. The rebate will go to the contractor and will be deducted from the price to the District.

The equipment supplied shall have a manufacturer's warrantee. The solar panel warrantee shall be for 25 years on performance. This is typically that the panel will produce at least 80% of its rated output after 25 years. The inverters shall have an extended warrantee of 20 years.

The system is required to have a monitoring system where District staff can view system performance characteristics.

Another option for funding a photovoltaic system other than direct purchase is leasing. District staff contacted two solar contracting companies who do leasing on residential buildings. Both said that leasing does not work well for government entities because, among other things, they have no income tax or property tax liability, so tax credits do not provide any benefit.

Bids

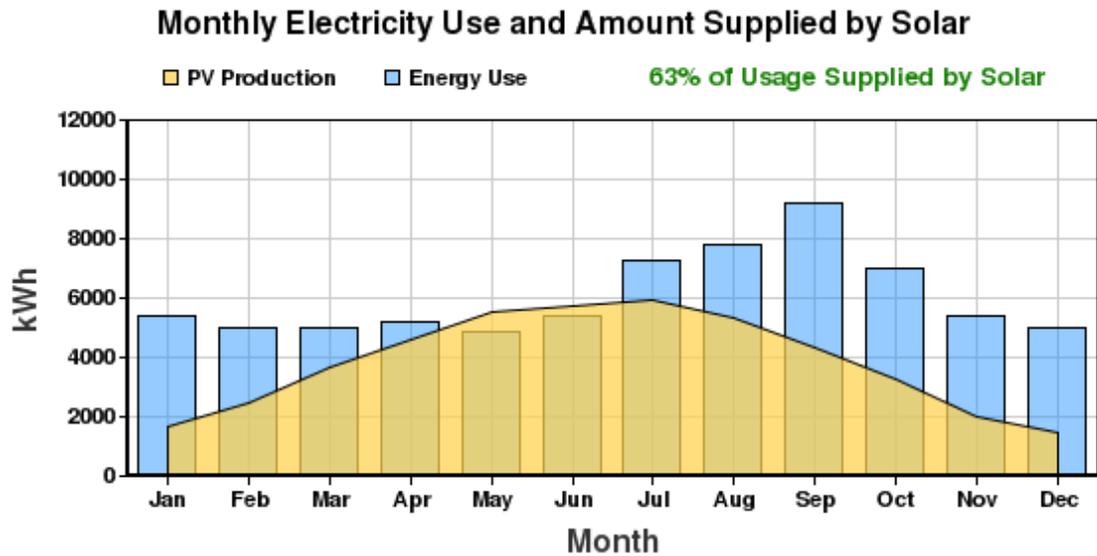
District staff initially contacted the Placer County Treasurer – Tax Collector Department to obtain the names of local solar contractors who had performed well in projects they conducted under the mPower Energy Financing Program. Based on this information, the District solicited and received two bids from local solar contracting firms capable of doing turn-key projects. Both bidders proposed similar systems. Below are some comparisons of the bids:

Contractor	RT Solar	Lifetime Solar
Price	\$82,377	\$95,174
System Size (kW AC)	29.78	28.43
Panel Mfr.	Yingli (Chinese)	Suniva (USA)
Number of Panels and Watts	140 @ 245 W	130 @ 255 W
Inverter Mfr. and Qty.	Power-One (3 total)	SMA (5 total)

Both contractors use different canned programs to estimate annual electrical production and cost savings on the utility bill. Predicting solar electrical output is based on average values for the weather for a specific location. For any specific year, the production may be different due to the weather being different from average. While modern solar panels all have about the same conversion efficiency, the performance estimates from the two contractors vary from annual production between 37,145 and 46,096 kWh and energy cost savings between \$6,200 and \$8,074 in the first year. Based on these cost savings the payback would be between 9 and 11 years. Both contractors say their experience has been that the estimates are conservative and they see actual performance higher than the estimates.

Selection of a winning bidder is therefore recommended based on price. RT Solar proposed the lowest cost and it is recommended that the contract be awarded to that company.

RT Solar's estimate of energy production of the system compared to historical electrical usage is shown below. Note that in May and June energy production is greater than usage. This surplus is credited in July.



Fiscal

Staff proposes that the system be paid for by using District reserves by reprogramming \$50,000 budgeted to be paid back to the Settlement Fund and drawing an additional \$40,000 from the Settlement Fund. BR-12-03 budget revision is included in this board item in the amount of \$90,000. This is to cover the low cost bid and an approximate 10% contingency for any unexpected cost items associated with installing the solar system.

ATTACHMENT #4

Subject:

Solar Specification



SOLAR PHOTOVOLTAIC SYSTEM FOR 110 MAPLE STREET, AUBURN

SPECIFICATION

- Roof mount on east and west sides of building
- Size (CEC AC rating): Up to , but not over, 30 kW AC power
- Panel Manufacturer: Recognized reputable panel manufacturer with 25 year warrantee
- Inverters: Recognized reputable inverter manufacturer with 20 year extended warrantee. Monitoring system to be included.
- Turn key project where contractor is responsible for design, engineering, permitting, installation, regulatory inspections, PG&E coordination, and CEC rebate.
- Contractor to receive CEC rebate directly
- Placer County Air Pollution Control District (PCAPCD) is a local government agency and is not eligible for tax credits or depreciation credit.
- Proposed payment schedule:
 - Contract signing: \$3,000
 - Material delivery to job site: 80%
 - PG&E connection and PCAPCD buyoff: balance
- Bids must be based on prevailing wage

ATTACHMENT #5

Subject:

RT Solar Proposal

Summary

Customer Don Duffy Air Pollution Control 530-745-2336 DDuffy@placer.ca.gov	Site Address 110 Maple Street Auburn Ca. Auburn, CA 95602	Mailing Address 110 Maple Street Auburn Ca. Auburn, CA 95602	Company Contact Rick Therien Owner RT Solar 2625 N. Lakewood Dr. Meadow Vista, CA 95722
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25 Year Financial Analysis

Utility Savings Over Initial Term	\$336,826 \$1,123 / mo (avg)
Payback Period	10-11 years
Total Life-Cycle Payback (Cash Flow compared to Net Cost)	409%
Rate of Return on Cash Invested	11.3%
Levelized Cost of Solar Energy	\$0.080 / kWh

Cost Breakdown

Gross System Cost	\$103,225	(\$3.01/watt DC, \$3.47/watt AC)
CSI - EPBB Step 10 (PG&E)	(\$20,848)	
Installer Contract Cost	<u>\$82,377</u>	(\$2.40/watt DC, \$2.77/watt AC)
Net Cost (year of installation)	\$82,377	(\$2.40/watt DC, \$2.77/watt AC)

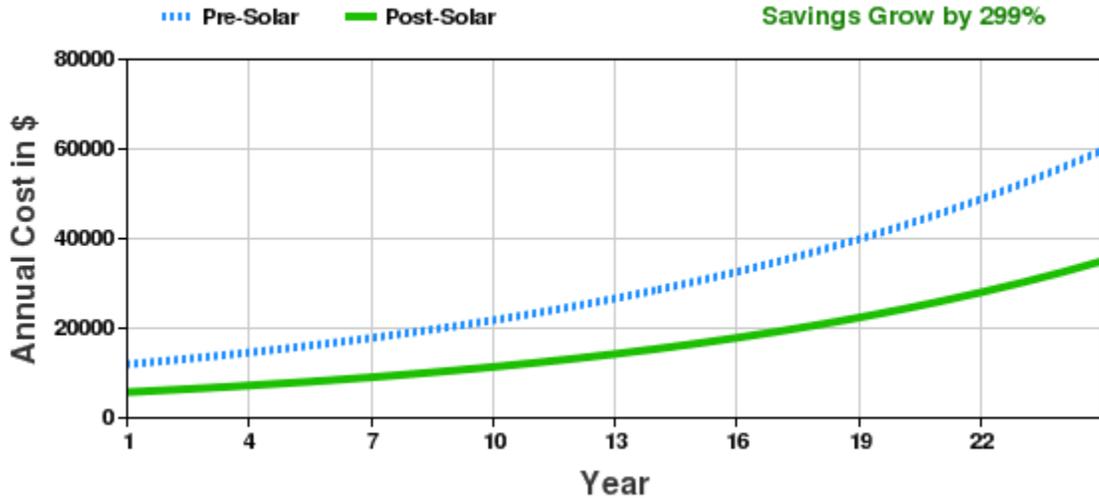
System Description

Total System Size	34.300 kW DC Power (STC) / 29.783 kW AC Power (CEC)
Estimated Annual Production	46,096 kWh
PV Panel Description	Qty. 140 - Yingli Green Energy Model: YL245P-29b
Inverters	Qty. 2 - Power-One Model: PVI-10.0-I-OUTD-x-US-208-y Qty. 1 - Power-One Model: PVI-10.0-I-OUTD-x-US-208-y

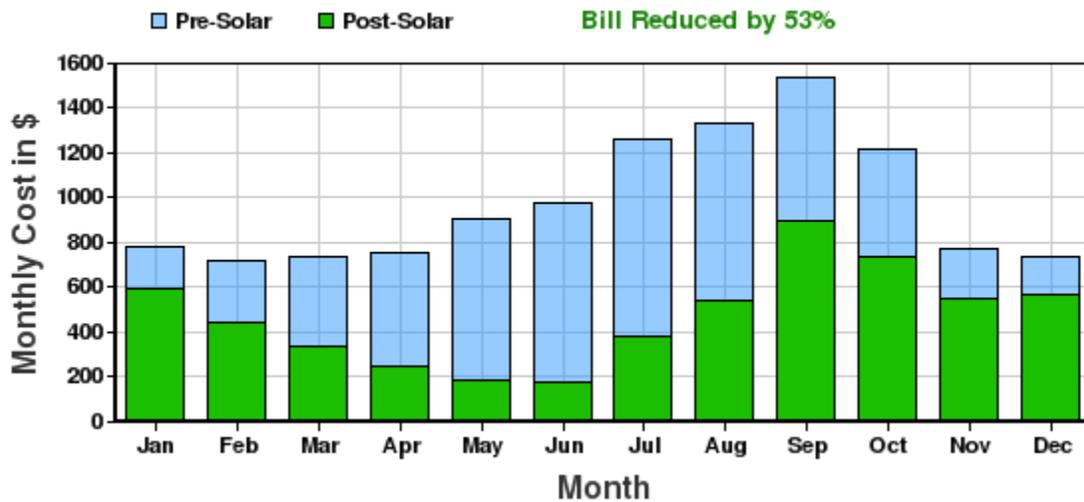
Energy Analysis

Your historical energy usage was used to help size your solar system. Based upon the system size suggested, the expected electricity bill savings over a 25 year period are provided. In addition, the first-year electricity bill savings you can expect are provided together with a chart of the monthly solar system output (PV production) you can expect.

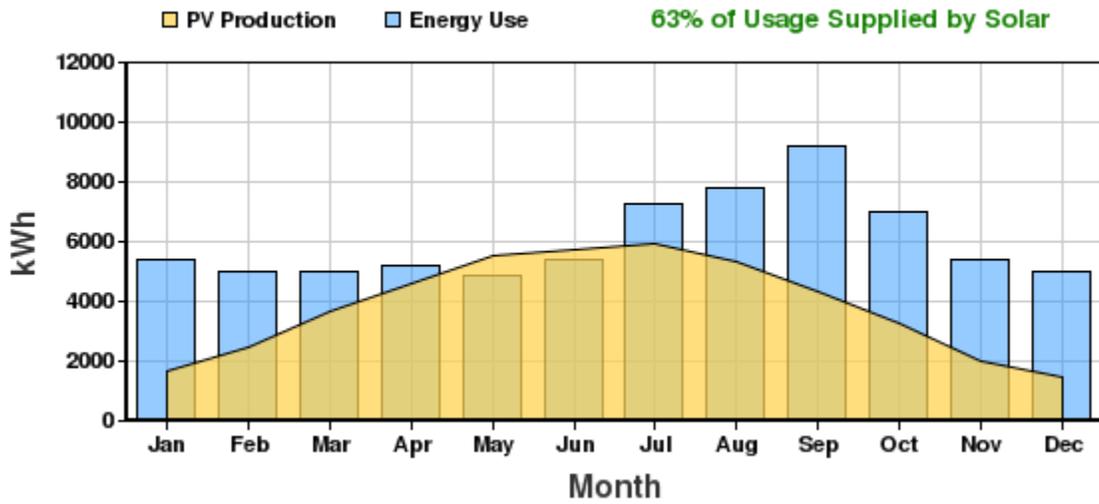
Annual Electricity Bill Savings Over Time



Monthly Electricity Bill Savings



Monthly Electricity Use and Amount Supplied by Solar



Assumptions: Post-Solar Electric Rate Schedule for Pacific Gas and Electric Co (PG&E) is Medium Demand Service (Secondary) w/ Meter (Rate Code: A-10S) Annual utility inflation: 7.00% (assumed). Energy Bill Savings are actual, without any tax effects applied.

Energy Bill Estimate

The following energy bill estimate is without any tax effects applied.

The **Energy Bill Savings** line does not include the opportunity cost of no longer being able to take energy bill expense deductions on corporate income taxes. See the Energy Bill Savings line in the cash flow for this tax impact.

(kWh)	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
PG&E Usage without Solar	5,400	5,000	5,000	5,200	4,900	5,400	7,300	7,800	9,200	7,000	5,400	5,000	72.6k
Solar Production	1,700	2,489	3,635	4,602	5,527	5,724	5,940	5,366	4,343	3,272	2,014	1,485	46.1k
PG&E Usage with Solar	3,700	2,511	1,365	598	-627	-324	1,360	2,434	4,857	3,728	3,386	3,515	26.5k

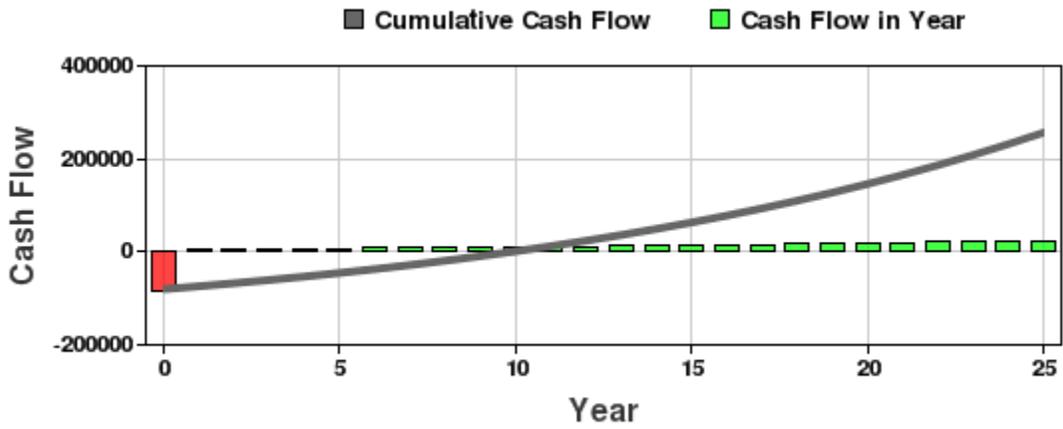
(Cost)	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
PG&E Bill without Solar*	\$780	\$718	\$736	\$752	\$907	\$975	\$1,261	\$1,334	\$1,535	\$1,217	\$774	\$736	\$11.7k
PG&E Bill with Solar*	\$593	\$444	\$335	\$245	\$185	\$179	\$386	\$544	\$895	\$735	\$552	\$572	\$5,665
Annual Excess Credit	Credit for excess electricity generated (month of credit depends on interconnect date)											\$140	\$140
PG&E Bill Savings	\$187	\$274	\$401	\$507	\$722	\$796	\$875	\$790	\$640	\$482	\$222	\$304	\$6,200

*Includes utility rate increase of 7.00%

NOTES ON Annual Excess Credit AND Energy Bill Savings:
 The Energy Bill Savings is your Pre-solar Bill minus the Post-solar Bill, plus the Annual Excess Credit (Utility True-up). The energy "Credit for excess electricity generated" cannot be greater than the energy charges incurred during the year.

Financial Analysis

The first chart summarizes the cash flow you can expect from the system quoted. Key financial measures are also provided.



Financial Summary	
Utility Savings Over Initial Term	\$336,826
Average Monthly Utility Savings	\$1,123 (over system life)
Net Cost (In year of installation)	\$82,377
Payback Period	10-11 years
Rate of Return on Cash Invested	11.3%
Total Life-Cycle Payback (Cash flow compared to Net Cost)	409%
Levelized Cost of Solar Energy (Net Cost / lifetime energy production)	\$0.080 / kWh

Cash Flow by Year

The following table of estimated cash flows includes any tax effects, rate and cost inflation and other time-related cash flow factors. Refer to the Disclaimers & Assumptions section (below) for further clarification.

Year:	0	1	2	3	4
Net Energy Bill Savings (Reduced by lower income tax deduction)	\$0	\$6,200	\$6,568	\$6,957	\$7,370
Installation, Operation & Maintenance Costs	(\$82,377)	\$0	\$0	\$0	\$0
Total Annual Cash Flow	(\$82,377)	\$6,200	\$6,568	\$6,957	\$7,370
Cumulative Cash Flow	(\$82,377)	(\$76,177)	(\$69,609)	(\$62,652)	(\$55,282)

Year:	5	6	7	8	9
Net Energy Bill Savings (Reduced by lower income tax deduction)	\$7,807	\$8,270	\$8,760	\$9,280	\$9,830
Installation, Operation & Maintenance Costs	\$0	\$0	\$0	\$0	\$0
Total Annual Cash Flow	\$7,807	\$8,270	\$8,760	\$9,280	\$9,830
Cumulative Cash Flow	(\$47,475)	(\$39,205)	(\$30,445)	(\$21,165)	(\$11,335)

Year:	10	11	12	13	14
Net Energy Bill Savings (Reduced by lower income tax deduction)	\$10,413	\$11,030	\$11,684	\$12,377	\$13,111
Installation, Operation & Maintenance Costs	\$0	\$0	\$0	\$0	\$0
Total Annual Cash Flow	\$10,413	\$11,030	\$11,684	\$12,377	\$13,111
Cumulative Cash Flow	(\$922)	\$10,108	\$21,792	\$34,169	\$47,280

Year:	15	16	17	18	19
Net Energy Bill Savings (Reduced by lower income tax deduction)	\$13,888	\$14,712	\$15,584	\$16,509	\$17,488
Installation, Operation & Maintenance Costs	\$0	\$0	\$0	\$0	\$0
Total Annual Cash Flow	\$13,888	\$14,712	\$15,584	\$16,509	\$17,488
Cumulative Cash Flow	\$61,168	\$75,880	\$91,464	\$107,973	\$125,461

Year:	20	21	22	23	24	25
Net Energy Bill Savings (Reduced by lower income tax deduction)	\$18,525	\$19,623	\$20,787	\$22,019	\$23,326	\$24,709
Installation, Operation & Maintenance Costs	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Cash Flow	\$18,525	\$19,623	\$20,787	\$22,019	\$23,326	\$24,709
Cumulative Cash Flow	\$143,986	\$163,609	\$184,396	\$206,415	\$229,741	\$254,450



Quotation & Contract for a Renewable Energy Power System

RT Solar

2625 N. Lakewood Dr.
Meadow Vista, CA 95722

Sales Consultant

Rick Therien
Tel: 530 878-6000
Email: rick@rtsolar.com

Customer

Don Duffy
530-745-2336 Email: DDuffy@placer.ca.gov

Site Address

Don Duffy
Air Pollution Control
110 Maple Street Auburn Ca.
Auburn, CA 95602

Mailing Address:

Don Duffy
Air Pollution Control
110 Maple Street Auburn Ca.
Auburn, CA 95602

Project Description & Major Components**Major System Components****PV Panels:**

Qty. 140 - Yingli Green Energy Model: YL245P-29b

Inverter(s):

Qty. 2 - Power-One Model: PVI-10.0-I-OUTD-x-US-208-y

Qty. 1 - Power-One Model: PVI-10.0-I-OUTD-x-US-208-y

System Size: 34.300 kW DC, STC (\$3.01/ DC watt)

System Size: 29.783 kW AC, CEC (\$3.47/ AC watt)

Standard Components

Racking and mounting components per Uniform Building Code. AC and DC disconnects per National Electric Code and Utility. Wiring, conduit and overcurrent protection per National Electric Code.

Standard Labor:

Design system and secure basic building or electrical permit (architectural, planning commission or other reviews are extra). Install specified system in good workman like manner. Complete and submit utility interconnection documents (if any). Coordinate building, electrical and utility inspections (as applicable).

Additional Components & Allowances:



System Pricing Details	
Installed System Price: Includes Sales tax and Shipping (before incentives)	\$103,225
Less Rebate(s) to be Received by Installer:	\$20,848
Contract Net Cost:	\$82,377

Payment Schedule	
Deposit, Due at signing for Design, Permits, etc.:	\$3,000
Due upon delivery of equipment to job site:	\$65,900
Payment Due upon approval and sign off from the Placer County Building Department :	\$13,477
Rebate applied toward Final Payment:	\$20,848
Any balance:	Due upon completion

Time for Completion:
 The work to be performed by Contractor pursuant to this Agreement shall be commenced within _____ days from this date or approximately on _____ and shall be substantially completed within ____ days or approximately on _____.

Construction Commencement Schedule:
 Commencement of work shall be defined as Delivery of material to site, or _____. Contractor`s failure to substantially commence work, without lawful excuse, within twenty (20) days from the date specified above is a violation of the Contractor`s License Law.

Additional Contract Provisions:
 All payments are due Net 10 days. 1% interest per month carrying charge.
 System completion occurs upon building or electrical inspectors permit signoff. Utility inspection typically occurs 4 to 14 days after permit signoff. Quoted system price includes permit and electric utility fees.
 This PV system includes a/the 10-year warranty required by the California Solar Initiative.

Acceptance	
This quotation is valid for 14 days from the above date, quoted schedule is valid for 3 days. If the customer decides to purchase the goods and services outlined above, this document shall become part of the Agreement for Supply and Installation of a Renewable Energy Power System which specifies additional terms and boilerplate consumer rights as part of a Home Improvement Contract.	
Salesperson Signature:	Date:
To be signed when customer decides to purchase	
Customer Acceptance Signature:	Date:

ATTACHMENT #6

Subject:

Lifetime Solar Proposal



LIFETIME SOLAR

Dependability you can trust

Solar System Proposal

Placer County Air Pollution Control

**110 Maple Street
Auburn CA 95603**



Lifetime Solar

8010 Mt. Vernon Auburn, California
520 S. Auburn, Colfax, California



CA License #582499



LIFETIME SOLAR

Dependability you can trust

November 20, 2012

Placer County Air Pollution Control
110 Maple Street
Auburn CA 95603

Placer County Air Pollution Control

We are pleased to provide you with the following proposal for a solar photovoltaic energy system for the subject site located at:

110 Maple Street
Auburn CA 95603

The proposal outlines the configuration for a 33.15 kW DC solar system which utilizes a Roof mount solar system on the subject property.

This proposal is for a full turn key solar system installation.

This proposal includes a Monitoring system. USA made Suniva 255W OPT-60-2-100 PV modules, which have the highest PTC rating with the CEC and CSI approval module list.

We hope you find the proposal to your satisfaction. If you have any questions and/or require any additional information please do not hesitate to contact the undersigned.

Thank you for your consideration,

Sincerely,

Pete Negri
Lifetime Solar
Office number: 530.346.6300

**520 South Auburn Street #B, Colfax California, Tel: 530.346.6300, Fax: 530.346.7800
8010 Mt. Vernon Road, Auburn California, Tel: 530.823.8769, Fax: 530.823.3843
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Array "A"
 19.89 DC kWh
 17.76 AC kWh
 Tilt = 26 degrees
 Azimuth = 174 degrees
 78 - Suniva 255W Modules
 3 - SMA SB7000US (240V) Inverters

Stringing = 2 circuits X 13 series
 Annual kWh = 22,511
Shading Derate
 NW(98%); NE(98%); SW(92%); SE(95%)

Array "C"
 13.26 DC kWh
 11.84 AC kWh
 Tilt = 26 degrees
 Azimuth = 94 degrees
 52 - Suniva 255W Modules
 2 - SMA SB7000US (240V) Inverters

Stringing = 2 circuits X 13 series
 Annual kWh = 14,634
Shading Derate
 NW(96%); NE(95%); SW(92%); SE(85%)

Placer County Air Pollution Control		Proposed New Solar System	
264, 94	Azimuth Facing	26 Tilt,	Roof Mount
33.15 kW DC (STC) System			
130	Suniva 255W OPT-60-4-100	Modules	
5	SB7000US (240V)	SMA	Inverters
Production	37,145	Annual kWh	
STRING SIZING			
<u>Circuits</u>	<u>Series</u>	Inverter Connection X	
2	13	5	SB7000US (240V) SMA

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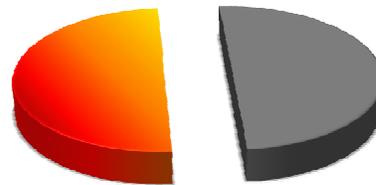
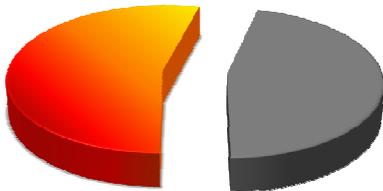
The Solar system will generate the majority of its energy during the daylight hours between 9am to 4pm especially during the summer months. This energy will help to offset the current consumption rate and reduce the electric bill. Based on the attached monthly electricity bill savings chart, we anticipate that we will be able to offset the projected electric bill by **64%**

Current Annual Electricity Usage: 68957 kWh annual
 CSI Usage supplied by Solar: 37145 kWh annual based on CSI Calculations
 Manufacturers Usage supplied by Solar: 43437 kWh annual based on Inverter Design Calculations

The above kWh offsets are based on customer having **92%** Shading Derate Factor.

54% CSI Usage Supplied by Solar

64% Current Bill Offset by Solar



Based on CSI Incentive Calculations

(kWh)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Total Usage	5395	5011	5015	5222	4922	5400	7322	7798	6631	5746	5416	5079	68957
Solar	1099	1876	2903	3803	4684	4853	5038	4519	3490	2584	1374	922	37145
Energy	4296	3135	2112	1419	238	547	2284	3279	3141	3162	4042	4157	31812

	PRE SOLAR	POST SOLAR
Estimated ANNUAL Bill Amount	\$12,642	\$4,568
Estimated Average MONTHLY Bill	\$1,054	\$381
Estimated First Year SAVINGS	\$8,074	

The above energy bill estimate is without any tax effects applied.

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CASH EXECUTIVE SUMMARY

Initial Proposal	Roof	Mount PV System
Proposed System DC Size	33.15	kW DC (STC)
Proposed System CEC AC Rating	28.43	kW AC (CEC)

Target Electricity Savings	\$8,074.05	First Year Savings
Average Monthly Utility Savings	\$1,476.60	(Over System Life)
Utility Savings Over System Life	\$442,979.02	

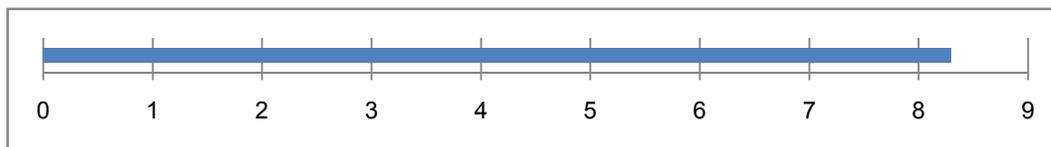
System Cost	\$111,890.00	
EPPB or PBI Rebate from Utility	\$16,716.00	(to be received by Customer)
30% Federal Tax Credit	\$0.00	(available through 2016)
Accelerated Depreciation	\$0.00	(first year - Bonus H.R. 4853)
<small>(Assumption Used: State Tax rate = 8.8%; Fed Tax rate = 35.0%; Total Effective Tax Rate Used = 43.8%)</small>		
Net Cost (Year of Installation)	\$95,174.00	

Cash Payback	396%	Total Life Cycle Payback (Cash Savings compared to Net Cost)
--------------	------	---

Rate of Return on Cash Invested	19%
---------------------------------	-----

Cumulative Cash Flow

The following graph shows the solar systems payback in years. The following cash flow statement does not include any financing costs nor the potential value from the Renewable Energy.



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Solar System Technical Proposal

Lifetime Solar is pleased to provide this proposal for a solar photovoltaic energy system. In accordance with your request this proposal is for the installation of a 33.15 kW Dc solar system which will offset 64% of the current utility bill and 54% of the current utility usage. The proposed system utilizes a Roof mount Solar system on the subject site.

The system will be equipped with US made Suniva 255OPT-60-2-100 (255 watt) modules. One of the highest ranking modules in the industry in PV (PTC) ratings. These 100% USA made Suniva Solar Modules offer high-yield, long-term performance & superior efficiency and reliability, to meet the highest standards in the world.

Suniva's leading cell and module technology guarantees the world class stability and reliability backed by 25 years performance warranty. All Suniva 255W's are US manufactured to the strictest engineering guidelines, ensuring each module meets the international and US standards of quality and safety.

The solar panels in the array(s) will be wired in series strings and consolidated in combiner box(es). The conductors and conduits are then routed to the inverter. The solar energy is converted from direct current (DC) to alternating current (AC) power in the inverter. The solar energy will then be fed into a new PV System Back-Feed circuit breakers installed in the existing main AC service panel where it will then feed the energy produced to the building loads or back to the grid.

It should be noted that if a solar system is sized to offset power loads larger than current consumption rates that a customer justification for the higher loads will be required by your utility company as part of the rebate application process.

Schedule

The overall project timeline is approximately 10 weeks dependent primarily on the materials delivery schedule and time of the Utility Company's final inspection and approval of the solar system. The project may be completed in less time if these items can be expedited. The Utility Companies usually take 3 to 5 weeks after the local building inspector signs-off to inspect and activate the system.

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Quotation & Contract for a Renewable Energy Power System

Lifetime Solar
520 S. Auburn Street
Colfax, CA 95713

Customer
Placer County Air Pollution Control
110 Maple Street
Auburn CA 95603

Tel: 530.346.6300

System CASH Pricing Details



Installed System Price	\$111,890.00
<i>Includes sales tax & shipping (before incentives)</i>	
Engineering, Design, Permits	
Less Rebate to be received by Lifetime Solar	\$16,716.00
Contract NET COST:	\$95,174.00

Utility inspection typically occurs 14 to 30 days after permit signoff. Quoted system price includes permit and electric utility fees. This PV system includes a 10 year warranty required by the California Solar Initiative.

ACCEPTANCE

This quotation is valid for 21 days from the above date. Buyer is made aware that he/she has the right to rescind this contract in writing with 3 days of acceptance. If the customer decides to purchase the goods and services outlined above, this document shall become the Agreement for Supply and Installation of the Renewable Energy Power System described above.

Salesperson Signature: _____ **Date:** _____
Lifetime Solar

Customer Acceptance: _____ **Date:** _____
to be signed when customer decides to purchase

Co Buyer Acceptance: _____ **Date:** _____

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Board Agenda

Action

Agenda Date: December 13, 2012

Prepared By: Bruce Springsteen, Compliance and Enforcement Manager

A handwritten signature in blue ink, appearing to read "B. Springsteen", is written to the right of the "Prepared By" text.

Topic: Approval of a Budget Revision to Support a Biomass Waste for Energy Greenhouse Gas Offset Credit Project in Partnership with the University of California Berkeley Center for Forestry, Blodgett Forest Research Station

Action Requested: Approve Budget Revision #12-04 (Attachment #1) thereby increasing the budgeted revenue and expenditure of funds by \$60,000, that is to be taken from the Sierra Pacific Industries Supplemental Environmental Project funds (received on June 21, 2010) and are contained in the District's Operations Fund, to support a Biomass Waste for Energy Greenhouse Gas Offset Credit project in partnership with the University of California Berkeley Center for Forestry, Blodgett Forest Research Station.

Discussion: The District manages an on-going Supplemental Environmental Project (SEP) supporting sustainable forest management practices that reduce air pollution. The SEP has included sponsoring projects that utilize forest biomass wastes for energy as an alternative to in-field open pile burning, mastication, or chip and scatter. The District has also developed a greenhouse gas (GHG) offset protocol for biomass waste for energy projects. The protocol is a formal accounting procedure to quantify and value the GHG benefits derived from biomass waste for energy projects. The SEP was an outcome of the settlement of an enforcement case with Sierra Pacific Industries. Those funds were received into the District's Operation Fund on June 21, 2010. The SEP portion of the Operations Fund has remaining funds of \$353,325 (which includes \$19, 667 for encumbered contracts).

The District has an opportunity to sponsor a biomass waste for energy GHG offset credit project, utilizing up to \$60,000 in SEP funds, in partnership with the University of California (U.C.) Berkeley's Department of Natural Resources Center for Forestry. The project will provide funding to allow the processing and transport of approximately 1,350 bone dry tons of forest slash waste for use as energy as an alternative to the planned disposal by open pile burning. The forest slash waste has been generated from timber harvesting and thinning fuel treatments at the Center for Forestry Blodgett Forest Research Station. The Station manages 5,000 acres of mixed-conifer forested land located in the Sierra Nevada Mountains of neighboring El Dorado County, five miles from the southern border of Placer County. The slash was destined for disposal through open burning as the cost to process and transport to the nearest utilization source is higher than the money that can be obtained for the material.

Based on the results of similar prior programs, District staff estimate a reduction of 500 metric tons of GHG and production of 1,500 MWh of renewable electricity. Additionally, criteria air pollutant reductions are projected at eight (8) tons of particulate matter, 80 tons of carbon monoxide, six (6) tons of volatile organic compounds, and two (2) tons of nitrogen oxides.

The District will enter into a research project contract with U.C. Berkeley for the District's funding of biomass processing and transport costs not recovered by biomass waste sales and for U.C. Berkeley support of project studies. Under this research project contract agreement, GHG offsets credits from the program will be controlled by, and accrue to, the District. GHG offset credits may be listed for sale on the California Air Pollution Control Officers Association GHG Registry, or issued through the District and sold to either the University of California Center for Sustainability or other entities desiring GHG offsets. The GHG offset credits will be sold at the cost required to generate, determined as the ratio of the District investment to the quantity of GHG offsets. Accordingly, some or all of the District's investment in the project may be recovered through the GHG offset credit sales and may then be available for investment into new local biomass waste for energy projects or other SEP projects.

See Attachment #2 (Project Plan) for additional biomass project details. See Attachment #3 for the Blodgett Forest Research Station Research Project Proposal.

With the approval of Budget Revision #12-04 the District will utilize up to \$60,000 in SEP funds to support a Biomass Waste for Energy project at the University of California Berkeley, Blodgett Forest Research Station. The District's Air Pollution Control Officer will negotiate and enter into necessary agreements on behalf of the District.

Fiscal Impact: Budget Revision #12-04 is to utilize no more than \$60,000 from the SEP portion of the District's Operations Fund that is currently held and managed by the District. Accordingly, unless the District is reimbursed the cost for the project implementation through the combination of the sales of GHG offset credits and power generation the District's budgeted fund balance will be reduced by \$60,000 if all expenditures occur.

Recommendation: Staff recommends that the Board approve and authorize the Chairperson to sign on its behalf Budget Revision #12-04 to utilize up to \$60,000 in SEP funding to support the University of California Berkeley Center for Forestry, Blodgett Forest Research Station biomass energy project.

Attachment(s) **#1:** Budget Revision #12-04 for FY 2012-13 – appropriating SEP funding from the District's Operation Fund to the Forest Research Station Biomass Energy project.
 #2: Project Plan
 #3: Blodgett Forest Research Station Research Project Proposal

ATTACHMENT #1

SUBJECT:

Budget Revision #12-04 for FY 2012-13

PLACER COUNTY
BUDGET REVISION

PAS DOCUMENT NO.

Dept No.	Doc Type	Total \$ Amount	Total Lines
73	BR	\$ 120,000.00	2

- | | | | |
|-------------------------------------|-------------------------------|--------------------------|--------------------|
| <input checked="" type="checkbox"/> | Cash Transfer Required | <input type="checkbox"/> | Auditor-Controller |
| <input type="checkbox"/> | Reserve Cancellation Required | <input type="checkbox"/> | County Executive |
| <input type="checkbox"/> | Establish Reserve Required | <input type="checkbox"/> | District Board |

ESTIMATED REVENUE ADJUSTMENT								APPROPRIATION ADJUSTMENT									
Dept No.	T Code	Rev	OCA	PCA	OBJ L-3	Proj. No.	G/L Sub GL	AMOUNT	Dept No.	T Code	Rev	OCA	PCA	Obj L-3	Proj. No.	G/L Sub GL	AMOUNT
073	006		000040	01020	8776			\$60,000.00	73	014		000040	01020	2555	Forest Biomass to Energy Rese		\$ 60,000.00
TOTAL								60,000.00	TOTAL								60,000.00

REASON FOR REVISION: To appropriate \$60,000 towards an evaluation of air quality benefits from using forest biomass wastes for energy as an alternative to open burning.

Distribution: District APCO _____
 All copies to Auditor: APCD District Board Chairman _____
 Auditor-Controller _____

Date: 12/13/2012 _____
 Page: 1 _____
 Budget Revision #12-04 _____

ATTACHMENT #2

SUBJECT:

Project Plan

Biomass Waste for Energy Greenhouse Gas Offset Credit Project in Partnership with the University of California Berkeley Center for Forestry, Blodgett Forest Research Station

UC Berkeley Blodgett Biomass Waste for Energy GHG Project

Project Plan

The University of California Berkeley Center for Forestry, Blodgett Forest Research Station forest has forest slash wastes in seven (7) separate piles, ranging in size from 100 to 550 bone dry tons (BDT), with a total of approximately 1,350 BDT. The location of the Station is shown in Figure 1. A pile is shown in Figure 2.

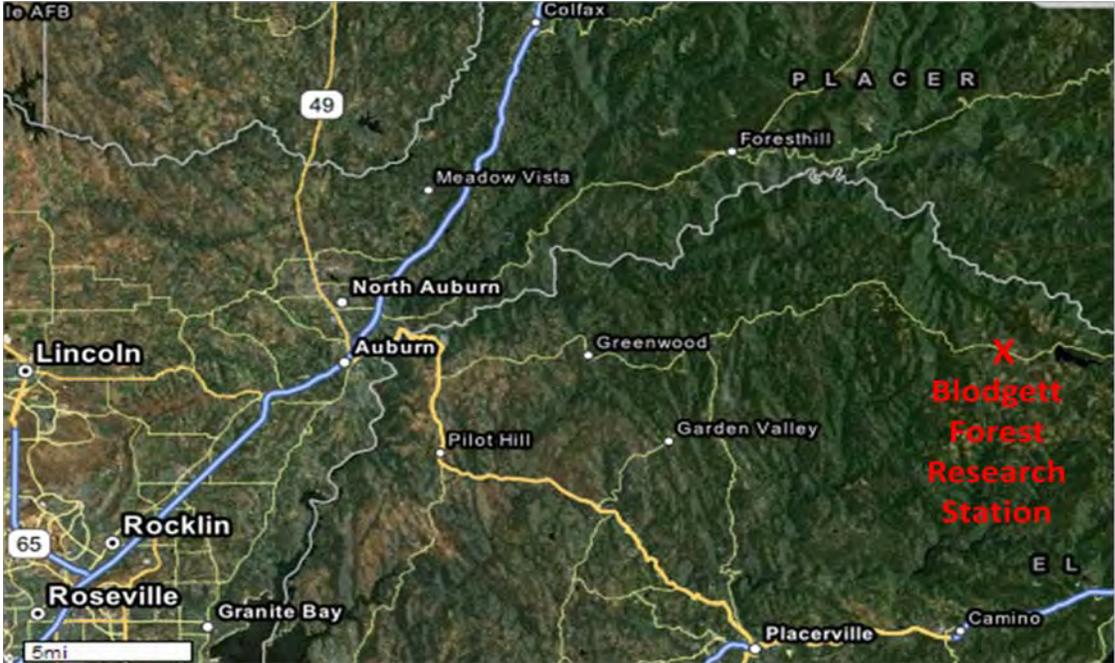


Figure 1. Location of Blodgett Forest Research Station



Figure 2. Slash pile at Blodgett Forest Research Station

The District has obtained a preliminary proposal from a local forest biomass contractor to grind and transport the slash to the Buena Vista Biomass Facility (in the vicinity of Ione and Jackson) for use as energy at a delivered cost of approximately \$55-60/BDT. The biomass energy facility gate price is currently \$40-45/BDT. The District will cover the difference of approximately \$27,000 (moving 1,350 BDT at a cost deficit of \$20/BDT). Additional funds, up to a total of \$60,000, will be used to manage the program and conduct data analysis and reporting.

The District will enter into a research project contract with U.C. Berkeley for project funding in return for University support of project studies and District ownership of GHG credits. The Station and District team will enter into a formal contract with a local biomass contractor to conduct the biomass processing and transport activities. The contractor will be selected based on a competitive request for proposal bid. The contractor will work with Station staff to conduct the work during the summer of 2013. The contractor will track program operations including diesel fuel usage for the grinder and chip vans, forest slash delivered production rate, equipment operating hours, and biomass facility electricity production.

The data gathered during the project operations will be used by the Station and District team to determine project economics and air pollutant impacts. The District Biomass Waste for Energy GHG Offset Protocol will be used to determine the quantity of GHG offsets that result from the program. District staff who have obtained GHG offset verification certification from the California Air Resources Board will conduct a formal verification of the program results.

ATTACHMENT #3

SUBJECT:

Blodgett Forest Research Station Research Project Proposal

SUMMARY REVIEW AND APPROVAL FORM FOR RESEARCH PROJECTS

<p>Blodgett Forest Research Station <i>College of Natural Resources</i> <i>Center for Forestry</i> <i>University of California, Berkeley</i></p>	<p><u>Review & Approvals:</u></p> <p>Site Manager [York] _____</p> <p>Center Director [Stewart] _____</p> <p>Center Co-Director [Stephens] _____</p>	<p><u>Date</u></p> <p>_____</p> <p>_____</p> <p>_____</p>
--	---	--

Please use a **DIFFERENT FONT** to fill out the proposal.

- 1) **BLODGETT PROJECT #** (assigned by Blodgett staff)
 BF12-05RY

- 2) **PROJECT TITLE: Forest Biomass Diversion - Tracking the Economic Costs and Air Emissions of Forest Biomass Diversion and Allocating the Air Emissions Credits Generated**

- 3) **PROJECT DESCRIPTION:**

Current business as usual activities for biomass disposal in much of the Sierra Nevada include pile and burn, mastication and drop/scatter techniques. The utilization of biomass material for energy production is an appealing outlet for biomass disposal that can benefit objectives of density management, forest health, and fire hazard reduction. In this project, we propose to collaborate with the Placer County Air Pollution Control District on a research project that tracks the economic costs and air emissions generated from the collection, processing and transport of forest harvest residuals generated at Blodgett in 2012. Destination for the processed forest biomass would be either the Rio Bravo Rocklin biomass plant or the SPI - Lincoln cogeneration plant. Implementation of collection, processing and transport activities would occur mid to late summer 2013. Using the Biomass Waste for Energy Project Reporting Protocol (version 4), developed by the Air District, greenhouse gas emissions offset credits that result from this project will be issued. These credits may have value for the UCB Office of Sustainability to mitigate the carbon footprint of the Berkeley campus. In addition to this potential campus-level benefit, the project represents an opportunity to dispose of large debris piles that would otherwise be burned.

- 4) **PROJECT PERSONNEL:**

Principal Investigator: Rob York, Center for Forestry

Co-PI's: Tom Christofk, PCAPCD

Bruce Springsteen, PCAPCD

Tad Mason, TSS Consultants

Ken Somers, Center for Forestry

Name:

Title:

Address:

e-mail:

Tel:

Signature: _____ Date: _____.

The signature above signifies acceptance of the terms and agreements described in this proposal.

Other personnel:

Please list all other personnel involved with this project (collaborators, graduate students, field personnel). Provide names and e-mail addresses. E-mail addresses will be added to the Center for Forestry's Researchers' list-serve to deliver periodic announcements.

5) **PAYMENT INFORMATION:**

Projects where use of Blodgett housing, equipment, or significant staff time are expected must provide information on how payments will be made. Center for Forestry staff will provide an invoice to non-UC researchers plus an income chart string for intra-UC transfers. Rates are updated annually and can be provided prior to the field season. Method of payment must be given below:

The market value of forest biomass material is not currently sufficient to cover 100% of the forecasted costs to collect, process and transport material to the closest biomass power generation facility. The Placer County Air Pollution Control District will offset the cost differential between the forest biomass market value and actual costs of collection, processing and transport. We do not expect any direct costs for Blodgett housing, equipment, or staff time to be incurred. Because of the potential significant benefit of this project to Center for Forestry's operation, staff will provide in-kind support in the form of study design, contract administration and field measurements.

6) **TIME FRAME**

Date project submitted: 9/17/12

Planned date for starting field work: August/September 2013

Planned date of field work completion: 11/1/13
(including removal of ALL field equipment)

Date field sites can be released for other studies: 12/1/13
(Typically this is the same date of field work completion)

Planned type and date of publication:

7) **RESEARCH OBJECTIVE OR HYPOTHESES EXAMINED:**
PLEASE BE AS COMPLETE AS POSSIBLE. ATTACH PAGES, IF NECESSARY
A 2008 research project sponsored by Placer County, Placer County Air Pollution Control District and the Sierra Nevada Conservancy demonstrated significant air emissions reduction through the diversion of forest biomass that was scheduled for open burning. Results of this research effort were delivered in the form of a November 2008 final report and were later published in the January 2011 Journal of the Air and Waste Management Association. A similar protocol will be used for the Blodgett study, with the objective of quantifying the emissions reductions gained from utilizing the biomass for energy production compared to open burning.

8) **SUMMARIZE MAIN AND INDEPENDENT VARIABLES, ANALYTICAL MODELS, TECHNIQUES, INSTRUMENTATION AND TREATMENTS USED, ETC.** If Chemicals, Insects, Fungi, Bacteria, Animals, Plants, Seeds, Toxic Materials, etc. are to be brought to the research station as part of the project, the amount, time, and location of use on the forest needs detailed specification (attach a detailed study plan if one has been prepared). Each Toxic Material must have a MSDS attached.
An independent biomass processing contractor will be retained to collect, process and transport as many of the 7 existing forest biomass piles now stockpiled on the research forest. Plans are to monitor equipment operating costs and efficiencies, as well as equipment air emissions.

9) **DATA TO BE COLLECTED**
Cost of biomass collection, processing and transport operations. Air emissions from biomass collection, processing and transport. Biomass power generation facility air emissions. Open pile burning air emissions. Processed forest biomass will be sampled and sent to a third party lab for testing of high heat value, moisture content and percent ash. Some biomass may also be sampled for nutrient content, in coordination with the on-going CEC study that is measuring biomass harvest effects on soil properties

10) **FREQUENCY (OR SCHEDULE) OF MEASUREMENTS**
Plan to commence measurements in August/September 2013 and complete field operations and measurements by November 2013. The study will involve the move-in and set up of a contractor with the appropriate equipment necessary for processing

and hauling the biomass material. The contractor will work with BFRS staff to ensure that waterbars and road drainage features are returned to a functioning status.

11) **SAFETY PROTOCOL TO BE IMPLEMENTED**

The Center for Forestry is not responsible for ensuring safe handling of researchers' own equipment. However, it is required that appropriate documentation be provided to assure that appropriate safety measures will be in place when field work is done. Please provide a list of equipment or materials that will be used and any safe handling instructions that will be provided to users.

Biomass processing contractor will provide proof of insurance and safety equipment. Use of Blodgett roads will be coordinated with Blodgett staff. Contractor will provide BFRS with an insurance certificate naming UC Regents as additional insured. Restrictions on timber operation activities are further defined in the Blodgett Timber Harvest Plan that covers the operation areas for this study.

12) **COORDINATING REQUIREMENTS** (necessary relationships to other research projects, the annual timber sale, and forest management program at Blodgett). For larger area habitat-related or longer term longitudinal studies, this needs careful planning and consulting with the Research Station Manager to be sure the research is feasible and possible conflicts are resolved or mitigated.

The Research Stations Manager and Operations Forester will work closely with the collaborators and contractor to avoid conflicts with other research and management objectives.

13) **LOCATION OF ACTIVITY (ATTACH MAP, INCLUDE TEXT DESCRIPTIONS):**

Identify and list the number of plots, treatments, and other activities by Blodgett Compartment number. If desired study locations change, approval from the Research Station Manager must be obtained. This may require a new proposal review.

A site visit in fall of 2012 will confirm which of the 7 piles currently on Blodgett may be feasible for the study. A map of the piles (see "stroker piles" in the legend) is included as an appendix. The piles are in compartments 301, 511, 461/462, 620, and 640.

14) **USE OF FACILITIES:** For example, expected needs for station data base, GIS, housing, lab space, shop space, access to power, computers, phones, equipment, or support of technical staff. Center for Forestry has annually updated costs for these services. An initial estimate can be provided with project approval.

Besides the facilities used by permanent staff for day-to-day operations, no use of facilities are expected.

15) **REQUESTED STATION SUPPORT:** Do you request any portion of the items listed in Item #14 to be subsidized (most service charges are designed to only partially offset actual station operating costs) by the Center for Forestry?

YES: NO:

IF "YES" -- Please describe why you believe extra Center support is appropriate.

Center for Forestry will contribute research, administrative, and technical expertise to this project. It is necessary for Center for Forestry staff to be directly involved with this project, because of the technical nature of the operations proposed. Because of the clear benefits of fire hazard reduction and the "proof of concept" outcome that will potentially benefit future biomass operations, the staff involvement is clearly justified. While the implications of this study's results are potentially Sierra Nevada-wide, the project also has the potential to open the door to further operations specifically at Blodgett. Such operations have the potential to reduce current impacts on air quality and fire hazard.

16) **PUBLICATION(S) / FACILITIES USE**

Use of Blodgett Forest for research requires all users agree to adhere to the following guidelines.

- 1) Any publication or presentation must acknowledge the University of California, Berkeley, Center for Forestry, Blodgett Forest Research Station as a cooperator.
- 2) Center for Forestry staff will be provided by Principal Investigator a copy of all papers or reports (including conference proceedings), when published.
- 3) Principal Investigator will not expand this proposed research project nor add research personnel without prior approval from Forestry Center Co-Directors.
- 4) Unless arranged otherwise, the Principal Investigator agrees to remove all materials from field sites by the end of the project date.

(Signature on the first page signifies acceptance of these conditions)

17) **BLODGETT FOREST RESEARCH WORKSHOP**

The Center for Forestry annually or semi-annually (depending on activity level of research) reviews active research projects. A mid-winter workshop is presented at Blodgett Forest Research Station for all researchers and interested parties, usually scheduled for late January or early February.

The annual workshop provides many benefits including:

- *opportunity for undergraduate and graduate students to present their work
- *communication of research ideas and results
- *opportunities for collaboration
- *enhancement of the intellectual life of our research community
- *expansion of the research profile and potential of Blodgett Forest
- *information on new and proposed research projects
- *an update on proposed management activities at Blodgett and other Center properties

All Researchers are asked to submit a brief ABSTRACT of research-in-progress, and are encouraged to make a 20 to 30 minute verbal presentation at the Workshop.

AN ANNUAL REFUNDABLE FEE OF \$100 MAY BE CHARGED TO EACH ACTIVE RESEARCH PROJECT TO SUPPORT THIS WORKSHOP. (Half the fee will be cancelled upon receipt of an abstract by the announced deadline – typically before December 31; the second half will be cancelled upon attendance at the Workshop.)

I EXPECT TO SUBMIT AN ABSTRACT OF MY RESEARCH ANNUALLY UNTIL THE PROJECT IS COMPLETE.

I AGREE TO MAKE EVERY EFFORT TO ATTEND THE ANNUAL RESEARCHWORKSHOP.

I UNDERSTAND MY PROJECT MAY BE CHARGED AN ANNUAL (REFUNDABLE) FEE OF \$100 FOR WORKSHOP SUPPORT.

PLEASE SUBMIT THIS COMPLETED FORM IN ELECTRONIC FORMAT TO:

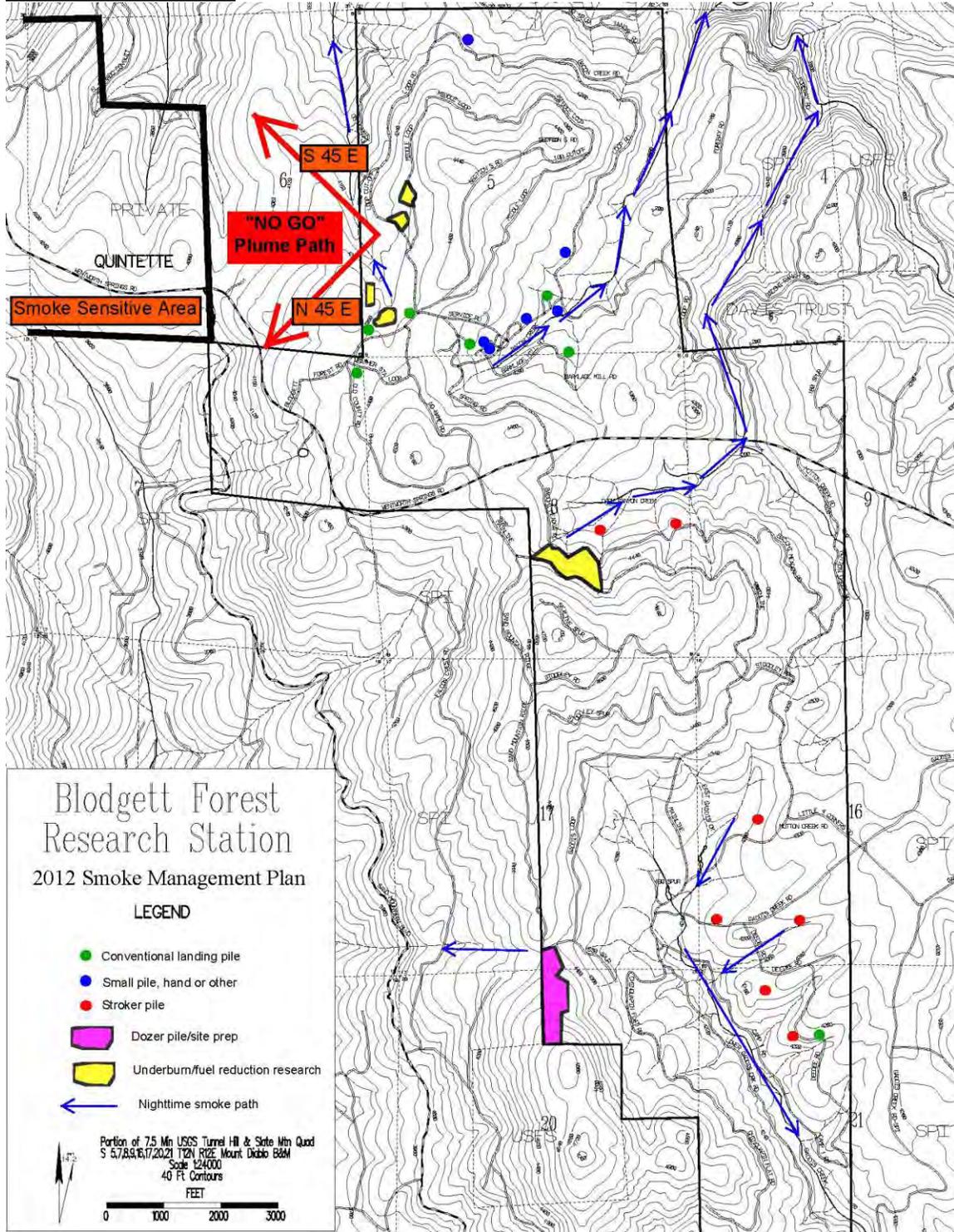
ryork@berkeley.edu

Mail or fax the signature page to:

**Blodgett Forest Research Station
4501 Blodgett Forest Road
Georgetown, CA 95634
(530) 333-4475
fax: 530-333-2012**

ADDITIONAL INFORMATION ON LAST PAGE:

Continued from Item #:





Board Agenda Item

Information

Agenda Date: December 13, 2012

Prepared By: Todd K. Nishikawa, Deputy Air Pollution Control Officer

Topic: Regulatory Measures List for 2013

Discussion: In accordance with Health and Safety Code Section 40923, a regulatory measure may not be considered for adoption during any year that it is not listed in the most recently published listing of proposed regulatory measures, unless earlier consideration is required to satisfy federal requirements, to abate a substantial endangerment to public health or welfare, or comply with Section 39666 (i.e. required to implement State Air Toxic Control Measures) or 40915 (i.e. contingency measures contained in air quality plans).

This listing requirement does not apply to administrative rules that are not control measures, or to the modification of any existing rule that the District finds is necessary to preserve the original intent of the rule or to increase opportunities for alternative compliance methodology.

District Staff have prepared a list of regulatory measures (Attachment #1) that may be considered for adoption in calendar year 2013. This list will be formally published January 1, 2013, as required by statute. Among the group of measures most likely to be considered is a new regulation for Large Water Heaters and Boilers between 75,000 BTU and 1,000,000 BTU. As a result of a RACT-SIP analysis of the District's rules in 2011, an amendment of Rule 217, Cutback and Emulsified Asphalt Paving Materials, and a new rule for Plastic Parts Coating are to be considered in order to meet current Reasonably Available Control Technology (RACT) standards. In addition, amendments are to be considered for Rule 502, New Source Review, and Rule 214, Transfer of Gasoline into Vehicle Fuel Tanks, to address EPA comments that have arisen during the SIP approval review of these previously adopted rules. The amendment of Rule 213, Gasoline Transfer into Stationary Storage Containers, is also to be considered to address deficiencies and other issues. Finally, the District will consider the amendment of Rule 206, Incinerator Burning, and/or Rule 222, Reduction of Animal Matter, or possibly a new rule to clarify the requirements for emissions from the cremation of human and animal remains.

In addition to measures most likely to be considered in 2013, the list of regulatory measures also includes a group of measures that may be considered but are less likely to be adopted or amended in 2013.

Fiscal Impacts: There may be additional compliance costs for affected facilities and additional administrative costs to the District from the adoption of new and amended rules. These costs will be specifically addressed, to the extent they may be determined, in the staff reports accompanying each new or amended rule at the time they are proposed for workshop or adoption.

Public Outreach: The Regulatory Measures List is to be formally released January 1, 2013, as required by statute, however the District placed a notice in a newspaper of general circulation (Auburn Journal on 11/2/13), advising the public that the Regulatory Measures List for the 2013 calendar year has been prepared and is available for public review. Although it does not appear that law requires a newspaper notice, the notice was published in the interest of advising the public. The Regulatory Measures List for 2013 may be also reviewed at the District offices or on the District's Internet webpage.

Attachment (s) #1: Regulatory Measures List: List of Rules to Be Considered for Adoption in 2013

ATTACHMENT #1

SUBJECT:

Regulatory Measures List:

List of Rules to Be Considered for Adoption in 2013

PLACER COUNTY AIR POLLUTION CONTROL DISTRICT

REGULATORY MEASURES LIST

- List of Rules to Be Considered for Adoption in 2013 -

January 2013

The listed rules or regulatory measures are being considered for adoption, amendment or rescission in the 2013 calendar year. If the rule or regulatory measure is not addressed in 2013, it may be considered for adoption, amendment, or rescission in the 2014 calendar year or later.

In accordance with Health and Safety Code Section 40923, a regulatory measure may not be considered for adoption during any year that it is not listed in the most recent published list of proposed regulatory measures unless earlier consideration is required to satisfy federal requirements, to abate a substantial endangerment to public health or welfare, or comply with Section 39666 (i.e. required to implement State Air Toxic Control Measures) or 40915 (i.e. contingency measures contained in air quality plans). This listing requirement does not apply to administrative rules that are not control measures, or the modification of any existing rule the District finds is necessary to preserve the original intent of the rule or to increase opportunities for alternative compliance methodology. Although not required by Section 40923, the list provided includes administrative rules to be considered for adoption, amendment or rescission in 2013 as such rules are identified by District staff.

Within 60 days from the date of a district's publication, pursuant to Section 40923, of the list of regulatory measures proposed for adoption in the following year, any person may inform the district of any existing federal or state air pollution control requirement or guideline or proposed or existing district air pollution control requirement or guideline that applies to the same type of source or equipment in that district as any proposed new or amended district rule or regulation on that district's list of regulatory measures. If any person informs the district of any requirement or guideline that does not apply to the same type of source or equipment, the district shall notify the person to that effect and shall not be required to review that requirement or guideline.

Regulations Being Considered for Adoption in 2013:

Most likely to be adopted, amended, or rescinded in 2013:

- Amend Rule 502, New Source Review, to address SIP disapproval comment of U.S. EPA (added for 2013).
- Amendment of Rule 206, Incinerator Burning, and if necessary, Rule 222, Reduction of Animal Matter, and/or a new Rule to resolve conflicting requirements for human/animal cremation (added 2010).
- Amend Rule 214, Transfer of Gasoline into Vehicle Fuel Tanks, to address US EPA comments and correct deficiencies required for SIP approval (added 2012).
- Amend Rule 213, Gasoline Transfer into Stationary Storage Containers, to address new standing loss requirements and deficiencies, and to provide an exemption for existing above ground tanks meeting specific requirements from new tank painting requirements so as to preserve public art murals (added 2013).

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- List of Rules to Be Considered for Adoption in 2013 -

- Amend Rule 217, Cutback and Emulsified Asphalt Paving Materials, to preserve the original intent of the rules to meet Federal CAA requirements for the adoption of RACT and California CAA requirements for the adoption of Best Available Retrofit Control Technology (BARCT) and “every feasible measure” (added 2009).
- Adoption of a new rule (possibly number 247) or amendment of an existing rule to set low NOx emission standards for newly installed Large Water Heaters and Boilers between 75,000 BTU and 1,000,000 BTU. This range of heating values is currently not addressed by a District rule. Adoption of a new or revised rule is a SIP commitment for 2015 (added 2010).
- Adopt Rule 249, Plastic Parts Coating, to satisfy Federal Reasonably Available Control Technology (RACT) requirements (added 2012).

To be considered, but less likely to be adopted or amended in 2013:

- Amendment of Rule 207, Particulate Matter, to address US EPA disapproval comments (added 2012).
- Amendment of the following rules if required to meet planning commitments and California CAA requirements for the adoption of Best Available Retrofit Control Technology (BARCT) and “every feasible measure”:
 - Rule 216, Organic Solvent Cleaning and Degreasing Operations (added 2009)
 - Rule 240, Surface Preparation and Cleanup (added 2012)
- Amendment of Rule 601, Permit Fees, to make fee schedule changes that will better reflect actual levels of effort and distributed program costs, while being relatively revenue neutral with respect to the total of permit fee revenue derived from stationary sources. Fee rules are administrative and are not regulatory measures; however, the consideration of the fee rules is mentioned to be as complete as possible in the disclosure of planned rules and rule changes (added 2009).
- Amendment of Rule 604, Source Test Observation and Report Evaluation, to allow fees to be assessed based on actual staff hours, if actual costs exceed the specified fee of \$220 for a source test observation and report evaluation, and to add an annual CPI adjustment to the \$220 fee. Fee rules are administrative and are not regulatory measures; however, the consideration of fee rules is mentioned to be as complete as possible in the disclosure of planned rules and rule changes (added 2010).
- Amendment of Rule 610, Air Toxics “Hot Spots” Fees, which authorizes fees to provide funding for the District “Hot Spots” program administration and technical evaluations, as well as fees for the California Air Resources Board that are collected by the District and then passed-through. The amendment is required to reflect current charges of ARB and current costs to the District. The Rule was last amended in 1998. Fee rules are administrative and are not regulatory measures that are required to be listed; however, the consideration of the fee rules is mentioned to be as complete as possible in the disclosure of planned rules and rule changes (added 2009).
- Adoption of new fees for toxic new source reviews, area-wide and indirect source reviews, naturally-occurring asbestos dust control plan reviews and fees to recover District costs for other reviews that are separate from fees included in Rule 601, Permit Fees, may be considered. Fee rules are administrative and are not regulatory measures; however, the consideration of the fee rules is mentioned to be as complete as possible in the disclosure of planned rules and rule changes (added 2005).

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- List of Rules to Be Considered for Adoption in 2013 -

- Adoption of a new rule or amendment of an existing rule defining the authority of the District to inspect permitted facilities; and to collect, record, and preserve evidence or information upon inspection (including documentation of compliance and non-compliance by the taking of photographs and video images) (added 2005).



For information and comparative purposes the regulatory measures that were actually adopted by the District in calendar years 2008 through 2012 are listed below:

Regulatory Measures That Were Adopted/Amended/Rescinded in 2012:

- Amend Rule 233, Biomass Boilers, to address US EPA comments and Federal Reasonably Available Control Technology (RACT) requirements required for SIP approval. Amended June 14, 2012.
- Amend Regulation 3, Open Burning, Rules 301 to 306, and Rule 102, Definitions, to address US EPA comments and deficiencies identified by District staff in order to avoid a limited approval/disapproval of the SIP revision. Amended February 8, 2012.
- Amend Rule 235, Adhesives, to meet Federal CAA requirements for the adoption of RACT. Amended October 11, 2012.
- Amend Rule 239, Graphic Arts Operations, to meet Federal CAA requirements for the adoption of RACT. Amended October 11, 2012.
 - Rule 240, Surface Preparation and Cleanup (added 2012)
- Rescind the following rules since the RACT requirement is no longer needed for major sources that are no longer operating:
 - Rule 229, Fiberboard Manufacturing (SierraPine Ltd.). Rescinded April 12, 2012.
 - Rule 230, Plastic Products and Materials - Paper Treating Operations (Formica Corporation). Rescinded April 12, 2012.
 - Rule 232, Biomass Suspension Boilers (SierraPine Ltd.). Rescinded April 12, 2012.
 - Rule 241, Boilers at Plastic Laminate Manufacturing Facilities (Formica Corporation). Rescinded April 12, 2012.
 - Rule 227, Petroleum Dry Cleaning Operations (will defer to Federal Standards). Rescinded April 12, 2012.
 - Rule 237, Municipal Landfills (no applicable sources remaining). Rescinded April 12, 2012.
 - Rule 506, Biomass Emission Reduction Credits (was replaced by Rule 516, Rice Straw Emission Reduction Credits). Rescinded April 12, 2012.
 - Rule 805, Notice to Comply (mandating statute sunset January 1, 2001). Rescinded April 12, 2012.
- Rescind the following rules in favor of implementing the state regulation (added 2010).
 - Rule 902, Airborne Chromium Control Measure - Emissions of Hexavalent Chromium From Chrome Plating and Anodizing Operations. Rescinded April 12, 2012.
 - Rule 903, Ethylene Oxide Airborne Toxic Control Measure for Sterilizers and Aerators. Rescinded April 12, 2012.
 - Rule 904, Airborne Toxic Control Measure - Hexavalent Chromium Emissions From Cooling

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- List of Rules to Be Considered for Adoption in 2013 -

- Towers. Rescinded April 12, 2012.
- Rule 905, Airborne Toxic Control Measure - Asbestos Containing Serpentine Rock in Surfacing Applications. Rescinded April 12, 2012.
- Rule 906, Airborne Toxic Control Measure - Medical Waste Incinerators. Rescinded April 12, 2012.

Regulatory Measures That Were Adopted/Amended in 2011:

- Rule 102, Definitions, to reflect new terms used in recently amended rules, particularly in the amendment of Regulation 3 (added 2011). Amended February 10, 2011.
- Rescinded Regulation 3, Open Burning, Rules 301 through 325 and adopted new Rules 301 – 306 to update the rules to match current state law and to address the US EPA's comments, and to reorganize and update the formatting of all of the Rules to make the requirements more easily understood (added 2010). Adopted February 10, 2011.
- Rule 412, Registration Requirements for Agricultural Engines, amended to provide for a low use exemption (added 2011). Amended August 11, 2011.
- Rule 502, New Source Review, amended to address deficiencies identified in a limited approval/disapproval by US EPA of the version of the rule that was adopted on February 11, 2010 (added 2011). Amended October 13, 2011.
- Rule 517, Requirements for Stationary Sources Emitting Greenhouse Gases, adopted to meet mandatory implementation requirements of the federal Greenhouse Gas Tailoring Regulation (added 2011). Adopted February 10, 2011.
- Rule 518, Prevention of Significant Deterioration Permit Program, adopted to provide for the District's acceptance of delegation from the US EPA of PSD permitting authority for Major Sources (added 2011). Adopted February 10, 2011.
- Rule 607, Burning Permit Fees, to reconcile changes in references to Regulation 3 rules and to definitions. No fees were revised. Amended February 10, 2011.
- Rule 608, Control Council Fee, to reconcile changes in references to Regulation 3 rules and to definitions. No fees were revised. Amended February 10, 2011.

Regulatory Measures That Were Adopted/Amended in 2010:

- Rule 102, Definitions, amended to reflect new terms used in rules (added 2010). Amended August 10, 2010.
- Rule 218, Architectural Coatings, amended to level the field for shop coaters and field coaters and to update the Rule for a 2007 CARB Suggested Control Measure. The amendment of Rule 218 is also a SIP commitment for 2012 (added 2007). Amended October 14, 2010.
- Rule 234, Automotive Refinishing Operations, amended to revise applicator requirements and may include an update of requirements to meet a 2005 CARB Suggested Control Measure (SCM). In addition, the District wishes to clarify the recordkeeping and reporting required of coating distributors. Amendment of this rule is a SIP commitment for 2015 (added 2009). Amended October 14, 2010.
- Rule 236, Wood Products Coating Operations and Rule 238, Factory Coating of Flat Wood Paneling, amended to update these rules to match existing state and federal control measure standards (added 2007). Amended October 14, 2010.

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- List of Rules to Be Considered for Adoption in 2013 -

- Rule 501, General Permit Requirements, amended for submission as a revision of the SIP (added 2009). Amended August 10, 2010.
- Rule 502, New Source Review, amended for submission as a revision of the SIP (added 2009). Amended February 11, 2010.
- Rule 503, Emission Statement, amended to clarify and update the terminology with regard to the information to be reported (added 2010). Amended August 10, 2010.
- Rule 504, Emission Reduction Credits, amended to reflect new ERC rules and for submission as a revision of the State Implementation Plan (added 2009). Amended August 10, 2010.
- Rule 601, Permit Fees, amended to create a new semiconductor fee schedule, and a new fee for Prevention of Significant Deterioration (PSD) permitting for when such authority is delegated to the District. Amended December 9, 2010.

Regulatory Measures That Were Adopted/Amended in 2009:

- Rule 214, Transfer of Gasoline into Vehicle Fuel Tanks. Amended April 9, 2009
- Rule 233, Biomass Boilers. Amended December 10, 2009
- Rule 245, Surface Coating of Metal Parts and Products. Amended August 20, 2009
- Rule 516, Rice Straw Emission Reduction Credits. Adopted February 19, 2009

Regulatory Measures That Were Adopted/Amended in 2008:

- Negative Declaration, adopted December 11, 2008, with regard to no sources in Placer County exceeding the threshold of Control of Volatile Organic Emissions from Flexible Package Printing (EPA-453/R, 06-003, 09/2006) to satisfy federal requirements.
- Rule 206, Incinerator Burning. Amended October 9, 2008
- Rule 245, Surface Coating of Metal Parts and Products. Adopted December 11, 2008
- Rule 411, Indemnification of District. Adopted February 14, 2008
- Rule 412, Agricultural Engine Registration. Amended August 14, 2008
- Rule 515, Stationary Rail Yard Control Emission Reduction Credits. Adopted October 9, 2008

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Board Agenda Item

Action

Agenda Date: December 13, 2012

Prepared By: Margie Koltun, Clerk of the Board *MK*

Topic: Board Resolution Commending Director Peter Hill for his service to the District

Action Requested: Adopt Resolution #12-13 thereby approving a commendation recognizing Director Peter Hill for his years of service on the Placer County Air Pollution Control District Board.

Discussion: Peter Hill was elected to the Rocklin City Council in April of 1980. At that time the District was a part of the Placer County Health & Human Services Department and the Placer County Board of Supervisors acted as the Board of Directors for the District. In January of 1995, the District Board changed to include three representatives from the County Board of Supervisors and three representatives from the incorporated cities.

Mr. Hill began his membership on the PCAPCD Board of Directors in June of 1997, and has remained on this Board except for the two years of rotation required by the Board's Administrative Rules and Bylaws that were in effect at that time. The Bylaws were later amended to provide for full time representation from each of the jurisdictions. Even when Mr. Hill was not sitting on your board, he continued to work on its behalf in his capacity as a member of the Rocklin City Council and as Mayor of Rocklin.

Mr. Hill has been a valuable member of this Board and has seen the District through many challenging times. He was instrumental in the restructuring of the District in 2000 and was supportive of creating a sound fiscal base in order to support District programs and state and federally mandated regulations. A list of some of the accomplishments of the District during his tenure is in the formal resolution.

Recommendation: Staff recommends that your Board adopt Resolution #12-13 thereby recognizing Peter Hill for his good governance of this District and his service to the citizens of Placer County by helping to improve and protect the air quality.

A framed copy of the resolution will be presented to Mr. Hill at the Board meeting.