

White paper:
Long-term energy efficiency strategic plan for
PacifiCorp's service territory in California
(2009 - 2020)



Prepared by

Presented to

Division of Ratepayer Advocates

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1. Introduction

PacifiCorp is a multi-jurisdictional electric utility providing electric service to approximately 1.6 million retail customers in California, Idaho, Oregon, Utah, Washington, and Wyoming. In California, PacifiCorp serves approximately 46,500 customers in Shasta, Modoc, Del Norte, and Siskiyou counties.

PacifiCorp appreciates the opportunity to share its long-term plans for energy efficiency programs across all customer sectors in California. PacifiCorp is committed to developing diverse and effective energy efficiency programs as a way to conserve limited resources and achieve cost savings for our customers. As a multi-jurisdictional utility, PacifiCorp has much experience with designing and implementing successful energy efficiency programs for residential, commercial, industrial and irrigation customers across our other jurisdictions, valuable experience that has guided our efforts in developing this white paper.

This white paper was prepared to meet the following commitment from the December 2007 settlement reached by PacifiCorp and the Division of Ratepayer Advocates in Application 07-07-011 and approved by the Commission in D.08-01-041:

“PacifiCorp agrees to submit to the Division of Ratepayer Advocates by February 28, 2009, a white paper which sets forth PacifiCorp's long term strategic plan for energy efficiency in its California service territory for each of its customer sectors (residential, commercial, industrial) through 2020. PacifiCorp agrees to participate as a stakeholder in the current energy efficiency strategic planning process that is a component of rulemaking, R. 06-04-010, to assist in informing the development of its long-term strategic plan. To the extent feasible, the white paper will reflect concepts and guidance documents from R. 06-04-010, adapted as relevant to PacifiCorp programs. PacifiCorp agrees to provide DRA a draft of the white paper for comment by January 31, 2009. PacifiCorp agrees to post the final white paper on its website, to submit the final white paper to the Commission's Energy Division when it is complete, and to attach the white paper to its next energy efficiency application.”

California Long Term Energy Efficiency Strategic Plan, September 2008

The California Long Term Energy Efficiency Strategic Plan (Plan) focuses on the importance of market transformation and includes the following visions:

- *Residential energy use will be transformed to ultra-high levels of energy efficiency resulting in Zero Net Energy new buildings by 2020. All cost-effective potential for energy efficiency, demand response and clean energy production will be routinely realized for all dwellings on a fully integrated, site-specific basis.*
- *Commercial buildings will be put on a path to zero net energy by 2030 for all new and a substantial proportion of existing buildings. Innovative technologies and enhanced building design and operation practices will dramatically grow in use*

in the coming years through a combination of comprehensive whole building programs, technology development, market pull, professional education, targeted financing and incentives, and codes and standards.

- *California industry will be vibrant, profitable and exceed national benchmarks for energy efficiency and resource management.*
- *Energy efficiency will support the long-term economic and environmental success of California agriculture.*

Accordingly, PacifiCorp's white paper follows a similar format. PacifiCorp's plan also seeks to promote market transformation where possible, and includes the following visions:

- *Residential energy use will be put on a path to substantial improvements in energy efficiency for all new and a substantial portion of existing dwellings. These energy efficiency improvements are an essential element in the path toward Zero Net Energy homes.*
- *Commercial buildings will be put on a path to substantial improvements in energy efficiency for all new and a substantial portion of existing buildings. Innovative technologies and enhanced building design and operation practices will dramatically grow in use in the coming years through a combination of comprehensive whole building programs, technology development, market pull, professional education, targeted financial offers including incentives, and codes and standards.*
- *California industry will be vibrant, profitable and exceed national benchmarks for energy efficiency and resource management.*
- *Energy efficiency will support the long-term economic and environmental success of California agriculture.*

2008 PacifiCorp Integrated Resource Plan

PacifiCorp files an Integrated Resource Plan (IRP) with regulators to share our plans to meet our customers' demand for electricity and comply with regulatory requirements. This plan is the company's road map, and it contains a preferred portfolio of resource types including energy efficiency and an action plan for acquiring resources to meet the electricity needs of our customers. This ongoing work informs the company's energy efficiency strategies and programs. Integrated Resource Plan information can be found at this link: <http://www.pacifiCorp.com/Navigation/Navigation23807.html>.

PacifiCorp Assessment of Long-Term System-Wide Potential for Demand-Side and Other Supplemental Resources – July 11, 2007

This potential study provides insights into the nature of the energy efficiency potential in PacifiCorp service territories and informs the company's long term strategic planning. Potential study data specific to the California service territory and the 2009 to 2020 time period is included in this white paper below and as part of the profile for each sector¹.

¹ The study was prepared before significant legislation such as the 2007 Energy Independence and Security Act and California Assembly Bill 1109.

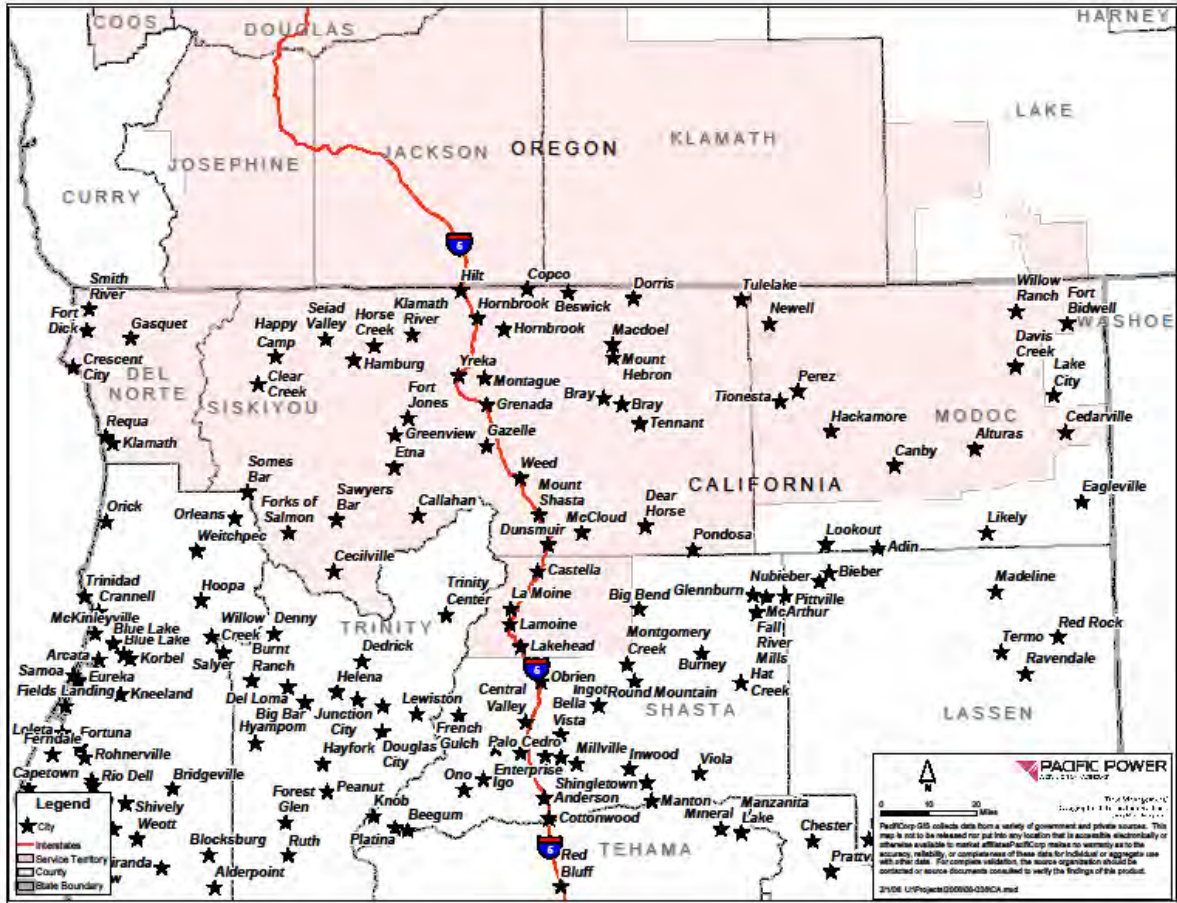
The potential study can be found at the following link:
<http://www.pacificorp.com/Article/Article75535.html>.

Given the extent of work already contained in the California Long Term Energy Efficiency Strategic Plan and the stated interest for PacifiCorp's strategic plan white paper to demonstrate long-term thinking, especially regarding end-to-end strategies for measure categories, PacifiCorp's white paper attempts to align with the California Plan as much as possible while focusing on end-to-end strategies leading to market transformation in PacifiCorp's California service territory. The company's current strategies include strategies listed in the California *Plan*, including customer education and incentives, and vendor support and training. PacifiCorp plans to adjust its offerings to support market transformation enabled by the California *Plan* where possible.

PacifiCorp anticipates updating and evolving its programs on an on-going basis based on many factors including program performance, market data, codes and standards updates, changes statewide as a result of Big Bold Initiatives, emerging technology, and many other factors. Cost-effectiveness for programs in smaller, more rural markets can be a challenge. Implementation of the long-term plan will be dependent upon cost-effectiveness and other criteria.

PacifiCorp's service territory in California

1.1.1. Service territory map



1.1.2. Ten largest communities (based on 2008 number of residential customers)

Ten Largest Communities (includes Unincorporated areas)	County	2008 Average # Residential Customers
1. Crescent City	Del Norte	9,756
2. Yreka	Siskiyou	5,806
3. Mt Shasta	Siskiyou	4,758
4. Weed	Siskiyou	3,812
5. Montague	Siskiyou	2,740
6. Alturas	Modoc	2,247
7. Tulelake	Modoc	1,721
8. Ft Jones	Siskiyou	1,595
9. Dunsmuir	Siskiyou	1,587
10. Etna	Siskiyou	1,388

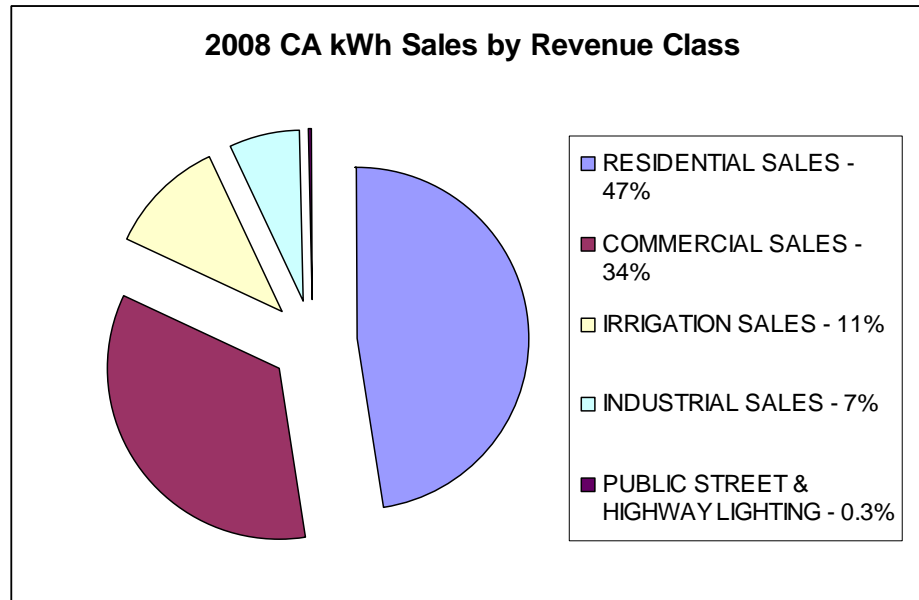
1.1.3. 2008 Average # customers and kWh by county and sector

2008 Average # Customers and kWh by county and sector

County	Residential		Commercial		Industrial		Irrigation		Public Street Lighting		Totals	
	# customers	kWh/yr	# customers	kWh/yr	# customers	kWh/yr	# customers	kWh/yr	# customers	kWh/yr	# customers	kWh/yr
Del Norte	10,238	135,642,804	1,723	98,003,939	43	10,579,153	70	2,643,683	24	538,293	12,098	247,407,872
Siskiyou	21,955	243,895,743	4,838	179,639,184	79	45,316,039	1,095	63,896,563	75	1,722,909	28,042	534,470,438
Shasta	410	7,213,783	87	2,268,238	1	15,111	0	-3,000	14	85,753	512	9,579,885
Modoc	2,744	31,582,564	972	24,344,772	13	1,748,790	678	33,489,703	12	229,590	4,419	91,395,419
	35,347	418,334,894	7,620	304,256,133	136	57,659,093	1,843	100,026,949	125	2,576,545	45,071	882,853,614

1.1.4. PacifiCorp California 2008 customer counts and loads by sector

Revenue Class	Billing Count	2008 kWh
Residential	35,347	418,334,894
Commercial	7,620	304,256,133
Industrial	136	57,659,093
Irrigation	1,843	100,026,949
Public Street & Highway Lighting	125	2,576,545
Total	45,071	882,853,614



1.1.5. Potential study excerpt – summary data for California, 2009 to 2020
(From potential study dated July 11, 2007, baseline sales data represents projected 2020 sales assuming no DSM programs)

	Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales
Residential	509,757,883	66,058,465	47,377,148	21,254,177	4.2%
Commercial	454,198,474	59,527,217	35,923,761	22,234,282	4.9%
Industrial	72,989,259	5,332,877	5,180,852	3,315,745	4.5%
Irrigation	93,902,702	8,527,709	5,432,977	3,477,105	3.7%
Total	1,130,848,318	139,446,269	93,914,738	50,281,309	4.4%

1.1.6. Potential study excerpt – detail data for California, 2009 to 2020

		Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales	Resource Cost Levelized \$/kWh
	Residential	509,757,883	66,058,465	47,377,148	21,254,177	4.2%	
	Commercial	454,198,474	59,527,217	35,923,761	22,234,282	4.9%	
	Industrial	72,989,259	5,332,877	5,180,852	3,315,745	4.5%	
	Irrigation	93,902,702	8,527,709	5,432,977	3,477,105	3.7%	
Total		1,130,848,318	139,446,269	93,914,738	50,281,309	4.4%	
Residential							
by end use	Lighting	78,967,860	20,395,351	20,395,351	9,949,861	12.6%	\$0.03
	Central Heat	44,644,354	10,273,337	8,372,489	3,688,772	8.3%	\$0.07
	Water Heat	77,631,470	11,511,697	6,530,463	3,022,317	3.9%	\$0.04
	Freezer	12,362,708	3,710,519	3,597,038	1,688,249	13.7%	\$0.04
	Room Heat	32,952,844	7,414,924	3,408,248	1,281,680	3.9%	\$0.07
	Heat Pump	25,860,055	6,606,411	3,089,909	923,438	3.6%	\$0.09
	Refrigerator	23,860,787	1,898,776	1,166,850	306,457	1.3%	\$0.06
	Central AC	3,208,620	934,973	395,471	187,894	5.9%	\$0.02
	Plug Load	157,889,674	1,582,823	317,316	154,985	0.1%	\$0.00
	Room AC	3,018,040	295,294	104,014	50,525	1.7%	\$0.07
	Cooking Oven	12,961,670	1,066,620	0	0		
	Cooking Range	12,249,159	0	0	0		
	Dryer	12,117,614	367,740	0	0		
	Evaporative AC	1,478,868	0	0	0		
	Other	10,554,160	0	0	0		
by segment	Single Family	382,051,802	46,161,332	33,162,890	14,728,454	3.9%	\$0.04
	Manufactured	89,801,802	14,744,525	11,901,716	5,421,141	6.0%	\$0.05
	Multi Family	37,904,279	5,152,609	2,312,542	1,104,582	2.9%	\$0.04
Commercial							
by end use	Lighting	190,711,878	21,651,695	16,495,718	11,876,901	6.2%	\$0.01
	Space Heat	36,147,254	10,071,977	6,156,113	3,236,914	9.0%	\$0.03
	Cooling DX	28,055,088	11,067,440	5,825,453	3,053,649	10.9%	\$0.09
	Heat Pump	18,611,231	5,792,200	2,647,277	1,395,190	7.5%	\$0.06
	Refrigeration	14,079,390	2,478,354	2,212,901	1,268,436	9.0%	\$0.03
	Water Heat	15,651,349	3,671,526	1,392,859	750,234	4.8%	\$0.03
	Cooking	19,951,101	969,299	862,271	471,834	2.4%	\$0.03
	HVAC Auxiliary	111,823,445	3,520,664	219,068	115,196	0.1%	\$0.06
	Plug Load	19,092,066	275,755	103,467	59,272	0.3%	\$0.05
	Cooling Chillers	75,572	28,306	8,634	6,657	8.8%	\$0.09
	Other	100	0	0	0		
by segment	Small Retail	121,613,809	12,526,258	7,852,246	5,266,076	4.3%	\$0.02
	Small Office	102,392,928	14,306,412	7,821,191	4,678,348	4.6%	\$0.03
	Health	93,561,926	13,326,926	7,379,039	4,630,470	4.9%	\$0.03
	Restaurant	57,682,947	7,524,840	5,530,030	3,125,833	5.4%	\$0.04
	Lodging	33,705,349	5,385,125	3,140,898	1,792,718	5.3%	\$0.03
	Miscellaneous	25,209,359	2,861,139	1,700,737	1,189,569	4.7%	\$0.02
	Grocery	11,439,565	1,906,900	1,509,807	966,521	8.4%	\$0.03
	School	7,891,390	1,617,251	933,274	542,359	6.9%	\$0.02
Warehouse	701,201	72,367	56,539	42,388	6.0%	\$0.01	
Industrial							
by end use	Process AirComp	9,271,267	1,106,197	1,106,197	707,966	7.6%	\$0.01
	Other	6,301,993	1,043,076	1,043,076	667,569	10.6%	\$0.00
	Pumps	16,039,175	993,983	993,983	636,149	4.0%	\$0.04
	Process Heat	3,319,271	554,014	554,014	354,569	10.7%	\$0.00
	Motors Other	18,164,634	539,412	539,412	345,223	1.9%	\$0.02
	Fans	6,801,957	256,862	256,862	164,392	2.4%	\$0.03
	HVAC	4,377,513	397,619	245,593	157,180	3.6%	\$0.05
	Lighting	4,750,348	219,799	219,799	140,671	3.0%	\$0.01
	Process Cool	455,996	120,353	120,353	77,026	16.9%	\$0.00
	Process Refrig	2,958,269	73,474	73,474	47,023	1.6%	\$0.01
	Process Other	110,909	28,088	28,088	17,976	16.2%	\$0.01
	Indirect Boiler	424,774	0	0	0		
	Process Electro Chemical	13,153	0	0	0		
by segment	Lumber Wood Products	61,488,722	4,068,333	3,916,307	2,506,437	4.1%	\$0.01
	Water	6,968,462	974,402	974,402	623,617	8.9%	\$0.05
	Wastewater	3,378,064	244,792	244,792	156,667	4.6%	\$0.04
	Miscellaneous Mfg	1,154,011	45,350	45,350	29,024	2.5%	\$0.02
Irrigation							
by end use	Pumps	84,512,432	8,527,709	5,432,977	3,477,105	4.1%	\$0.03
	Other	9,390,270	0	0	0		
by segment	Irrigation	93,902,702	8,527,709	5,432,977	3,477,105	3.7%	\$0.03

Residential and Commercial sectors account for more than 80% of 2008 sales and estimated achievable energy efficiency potential.

2. Residential sector

2.1. Vision - includes key energy efficiency elements of California's Long Term Energy Efficiency Strategic Plan vision for the residential sector

Residential energy use will be put on a path to substantial improvements in energy efficiency for all new and a substantial portion of existing dwellings. These energy efficiency improvements are an essential element in the path toward Zero Net Energy homes.

2.2. Strategy – The potential study data excerpt below indicates the largest residential DSM potential is in lighting, followed by HVAC, water heating and appliances. The company's strategy is to focus on these end uses while adding to programs over time to be as comprehensive as possible.

2.3. Residential profile

2.3.1. Customer counts and 2008 kWh by rate schedule

Rate Description	Billing Count	2008 kWh
SCHEDULE 15R-OUTDOOR LIGHTING	391	364,751
SCHEDULE DL06-RESIDENTIAL LOW INCOME	9,126	107,293,158
SCHEDULE D-RESIDENTIAL SERVICE	19,047	205,350,719
SCHEDULE DM9-MULTI FAMILY	8	280,281
SCHEDULE DS8-MULTI FAMILY SUBMETER	15	1,399,795
NETMT135 - RESIDENTIAL NET METERING	11	85,780
SCHEDULE DN - RESIDENTIAL - DEL NORTE	7,576	99,597,410
UNBILLED		3,963,000
LESS MULTIPLE BILLINGS	-827	
	35,347	418,334,894

2.3.2. Potential study excerpt – residential data for California, 2009 to 2020

		Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales	Resource Cost Levelized \$/kWh
Residential							
by end use	Lighting	78,967,860	20,395,351	20,395,351	9,949,861	12.6%	\$0.03
	Central Heat	44,644,354	10,273,337	8,372,489	3,688,772	8.3%	\$0.07
	Water Heat	77,631,470	11,511,697	6,530,463	3,022,317	3.9%	\$0.04
	Freezer	12,362,708	3,710,519	3,597,038	1,688,249	13.7%	\$0.04
	Room Heat	32,952,844	7,414,924	3,408,248	1,281,680	3.9%	\$0.07
	Heat Pump	25,860,055	6,606,411	3,089,909	923,438	3.6%	\$0.09
	Refrigerator	23,860,787	1,898,776	1,166,850	306,457	1.3%	\$0.06
	Central AC	3,208,620	934,973	395,471	187,894	5.9%	\$0.02
	Plug Load	157,889,674	1,582,823	317,316	154,985	0.1%	\$0.00
	Room AC	3,018,040	295,294	104,014	50,525	1.7%	\$0.07
	Cooking Oven	12,961,670	1,066,620	0	0	.	.
	Cooking Range	12,249,159	0	0	0	.	.
	Dryer	12,117,614	367,740	0	0	.	.
	Evaporative AC	1,478,868	0	0	0	.	.
Other	10,554,160	0	0	0	.	.	
by segment	Single Family	382,051,802	46,161,332	33,162,890	14,728,454	3.9%	\$0.04
	Manufactured	89,801,802	14,744,525	11,901,716	5,421,141	6.0%	\$0.05
	Multi Family	37,904,279	5,152,609	2,312,542	1,104,582	2.9%	\$0.04

2.3.3. Summary of PacifiCorp’s current Home Energy Savings program

- Home Energy Savings (Schedule D-118) was approved effective February 19, 2008. Below is a summary of the incentives. Work with local retailers and contractors began in 2008 and will continue to evolve.

Appliance & Lighting				
Equipment/ Service	Customer Incentive	Contractor Incentive	Qualifications	Form
Clothes washer (MEF 1.72-1.99)	\$50	n/a	MEF 1.72-1.99	Download
Clothes washer (MEF 2.0+)	\$75	n/a	MEF 2.0+	Download
Clothes washer recycling	n/a	\$25	Requires recycling documentation and receipt of customer form for purchase incentive	Download
Refrigerator	\$20	n/a	ENERGY STAR®	Download
Refrigerator/ freezer recycling	\$35	n/a	Must be in working condition. Minimum of 10 cubic feet in size (based on inside measurements).	(Call or apply online)
Dishwasher	\$20	n/a	EF .68+	Download
Electric water heater	\$40	n/a	EF .93+ (40 gallon or larger)	Download
Lighting fixtures	\$20	n/a	ENERGY STAR®	Download
Ceiling fans	\$20	n/a	ENERGY STAR®	Download
CFLs (compact fluorescent lamps)	Special pricing at \$1.49 or less	n/a	Available at select stores only	<i>In-store promotion</i>

HVAC Equipment & Service				
Equipment/ Service	Customer Incentive	Contractor Incentive	Qualifications	Form
Efficient central a/c equipment	\$100	\$25	Equipment must be 15+ SEER/12.72 EER and have a field-installed Thermal Expansion Valve (TXV).	Download
Commissioning (Tune-up)	\$100	\$25	Existing homes only; work must be performed by a program qualified contractor.	Download
Duct Sealing	\$150	\$50	Existing homes only; work must be performed by a program qualified contractor.	Download
Evaporative cooler	\$150	\$25	Available for existing and new homes. Must be a new, first-time installation and be the primary source of cooling for the home. Unit may be installed by the customer or by a contractor.	Download

New Homes			
Equipment/ Service	Customer Incentive	Contractor Incentive	Qualifications
New Homes (gas)	n/a	\$750	90% EFUE furnace, CAC 15 SEER and TXV/12.72 EER, shell upgrades: wall insulation R-21, floor insulation R-30, attic insulation R-50, windows U 0.35 and SHGC 0.32, duct sealing R-8, dishwasher EF 0.68
New Homes (electric)	n/a	\$900	8.5 HSPF heat pump or CAC 15 SEER and TXV/12.72 EER, shell upgrades: wall insulation R-21, floor insulation R-30, attic insulation R-50, windows U 0.35 and SHGC 0.32, duct sealing R-8, dishwasher EF 0.68

2.4. Residential implementation plan and timeline

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 – 2015	Long Term 2016 – 2020
Lighting				
Compact fluorescent lamps (CFL)	<p>Retailers</p> <p>2007 California Lighting Efficiency and Toxics Reduction Act</p> <p>ENERGY STAR</p> <p>Consortium for Energy Efficiency</p> <p>CFL Manufacturers - GE, Sylvania, Philips</p> <p>Testing Labs – PNL</p> <p>Lighting design lab</p>	<p>Expand to include specialty bulbs in the existing CFL buy-down program</p> <p>Transition/phase out CFL Mark/Buydown (consistent with the phase-in of CA lighting standards and CFL market transformation)</p> <p>Add new and improved lighting technology to the program</p> <ul style="list-style-type: none"> - Low Mercury - Instant on - Full Dimmability <p>Consumer education for:</p> <ul style="list-style-type: none"> - lighting applications - Proper disposal - Environmental issues -recycling <p>Analyze and review cost-effectiveness of LED lighting</p>	<p>Continue to review new lighting and lighting control technologies and add to the program as appropriate. Transition/phase out measures where the market has transformed.</p> <p>Ready to install LEDs:</p> <ul style="list-style-type: none"> - under counter - recessed - cove lighting <p>Determine LEDs as bulb replacements – coordinate with:</p> <ul style="list-style-type: none"> - EPA ENERGY STAR, DOE, and Manufacturers - Electron Stimulated Luminescence - (e.g. VU1.com) 	<p>Continue to review new lighting and lighting control technologies and add to the program as appropriate. Transition/phase out measures where the market has transformed.</p> <p>LEDs</p> <ul style="list-style-type: none"> - bulb replacement <p>VU1 technology</p> <p>Education delivery for CFL:</p> <ul style="list-style-type: none"> - disposal - recycling
Lighting fixtures, ceiling fans	<p>Retailers</p> <p>Energy Star</p> <p>Consortium for Energy Efficiency</p>	<p>Continue to review new lighting and lighting control technologies and add to the program (and/or delete) as appropriate.</p>	<p>Continue to review new lighting and lighting control technologies and add to the program (and/or delete) as appropriate as markets transform.</p>	<p>Continue to review new lighting and lighting control technologies and add to the program (and/or delete) as appropriate as markets transform.</p>

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 – 2015	Long Term 2016 – 2020
HVAC				
HVAC	Vendors, installation contractors ENERGY STAR California energy code Big Bold HVAC initiatives	Review results of new regional climate optimized equipment from Big Bold initiatives ENERGY STAR or other recognized HVAC quality installations “Ducts inside the envelope”. Ductless Heat Pumps Requirements for optimal air distribution ACCA Manual for “right sizing”	Ongoing review of results from Big Bold HVAC initiatives Continue to review new HVAC and HVAC control technologies and add to the program as appropriate. Transition/phase out measures where the market has transformed.	Ongoing review of results from Big Bold HVAC initiatives Continue to review new HVAC and HVAC control technologies and add to the program as appropriate. Transition/phase out measures where the market has transformed.
Appliances				
Clothes washers	California appliance efficiency standards Consortium for Energy Efficiency	Continue to review eligibility and incentives levels and adjust for current and new technology. Research emerging clothes washer technologies.	Continue to review Energy Star and other regulatory agency guidelines to adjust and make recommendations about adopting new savings measures. Transition/phase out measures where the market has transformed.	Continue to review Energy Star and other regulatory agency guidelines to adjust and make recommendations about adopting new savings measures. Transition/phase out measures where the market has transformed.
Energy Star appliances (e.g. refrigerators, dishwashers)	Retailers Manufacturers California appliance efficiency standards Energy Star Consortium for Energy Efficiency	Continue to review eligibility and incentives levels and adjust for current and new technology. Research emerging appliance technologies.	Continue to review Energy Star and other regulatory agency guidelines to adjust and make recommendations about adopting new savings measures. Transition/phase out measures where the market has transformed.	Continue to review Energy Star and other regulatory agency guidelines to adjust and make recommendations about adopting new savings measures. Transition/phase out measures where the market has transformed.

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 – 2015	Long Term 2016 – 2020
Appliance recycling	Appliance recyclers	Continue offering pickup and recycling of working units and a small incentive until program participation is significantly reduced. Evolve the program delivery, align with the statewide program, and evolve the measures in the instant savings kit.		
New Homes				
New Homes	<p>Builders</p> <p>California Energy Code</p> <p>Big Bold new homes initiatives</p>	<p>Improved lighting</p> <p>Evolve the new homes measures to incorporate new ENERGY STAR or other recognized voluntary standards</p> <p>“Indoor Air Plus” - EPA</p> <ul style="list-style-type: none"> - Radon control - VOC control <p>Water Management</p> <p>Vapor Flow</p> <p>Fan Flow</p> <p>Mechanical ventilation ERV/HRVs</p> <p>Super windows</p> <p>50% reduction in thermal loss</p> <p>Super efficient hot water</p> <p>Occupant behavior</p>	Support and provide incentives for cost-effective energy efficiency measures and strategies that are essential for Zero Net Energy new homes.	Continue to support and provide incentives for cost-effective energy efficiency measures and strategies that are essential for Zero Net Energy new homes.

3. Commercial sector

3.1. Vision – includes the key energy efficiency elements of California’s Long Term Energy Efficiency Strategic Plan

Commercial buildings will be put on a path to substantial improvements in energy efficiency for all new and a substantial portion of existing buildings. Innovative technologies and enhanced building design and operation practices will dramatically grow in use in the coming years through a combination of comprehensive whole building programs, technology development, market pull, professional education, targeted financial offers including incentives, and codes and standards.

3.2. Strategy – The potential study data excerpt below indicates the largest commercial DSM potential is in lighting and HVAC. The company’s strategy is to focus on these end uses while adding to programs over time to be as comprehensive as possible.

3.3. Commercial profile

3.3.1. Customer counts and 2008 kWh by rate schedule

Rate Description	Billing Count	2008 kWh
SCHEDULE A32-GENERAL SERVICE	878	79,766,517
SCHEDULE A25-GENERAL SERVICE	6,912	65,446,764
SCHEDULE 25F-GENERAL SERVICE	93	948,359
SCHEDULE A36-LARGE GENERAL SERVICE	192	84,922,631
SCHEDULE 15N-OUTDOOR AREA LIGHTING	545	751,365
SCHEDULE 42-AIRWAY & FIELD LIGHTING	39	202,587
SCHEDULE 31-COMMERCIAL WATER HEAT	29	220,570
SCHEDULE 48T-LARGE GENERAL SERVICE	10	71,047,300
NMT32135-GENERAL SERVICE NET METER	1	14,040
UNBILLED	0	936,000
LESS MULTIPLE BILLINGS	-1,079	
	7,620	304,256,133

3.3.2. Potential study excerpt – commercial data for California, 2009 to 2020

		Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales	Resource Cost Levelized \$/kWh
Commercial							
by end use	Lighting	190,711,878	21,651,695	16,495,718	11,876,901	6.2%	\$0.01
	Space Heat	36,147,254	10,071,977	6,156,113	3,236,914	9.0%	\$0.03
	Cooling DX	28,055,088	11,067,440	5,825,453	3,053,649	10.9%	\$0.09
	Heat Pump	18,611,231	5,792,200	2,647,277	1,395,190	7.5%	\$0.06
	Refrigeration	14,079,390	2,478,354	2,212,901	1,268,436	9.0%	\$0.03
	Water Heat	15,651,349	3,671,526	1,392,859	750,234	4.8%	\$0.03
	Cooking	19,951,101	969,299	862,271	471,834	2.4%	\$0.03
	HVAC Auxiliary	111,823,445	3,520,664	219,068	115,196	0.1%	\$0.06
	Plug Load	19,092,066	275,755	103,467	59,272	0.3%	\$0.05
	Cooling Chillers	75,572	28,306	8,634	6,657	8.8%	\$0.09
Other	100	0	0	0	.	.	
by segment	Small Retail	121,613,809	12,526,258	7,852,246	5,266,076	4.3%	\$0.02
	Small Office	102,392,928	14,306,412	7,821,191	4,678,348	4.6%	\$0.03
	Health	93,561,926	13,326,926	7,379,039	4,630,470	4.9%	\$0.03
	Restaurant	57,682,947	7,524,840	5,530,030	3,125,833	5.4%	\$0.04
	Lodging	33,705,349	5,385,125	3,140,898	1,792,718	5.3%	\$0.03
	Miscellaneous	25,209,359	2,861,139	1,700,737	1,189,569	4.7%	\$0.02
	Grocery	11,439,565	1,906,900	1,509,807	966,521	8.4%	\$0.03
	School	7,891,390	1,617,251	933,274	542,359	6.9%	\$0.02
	Warehouse	701,201	72,367	56,539	42,388	6.0%	\$0.01

3.3.3. Summary of current programs

- FinAnswer Express (Schedule A-115) – prescriptive incentives (\$/fixture, \$/motor, \$/ton). Refer to the program brochures in the appendix or www.pacificpower.net/casave
- Energy FinAnswer (Schedule A-125) – technical services, custom incentives. Refer to the program brochures in the appendix or www.pacificpower.net/casave

3.4. Commercial implementation plan and timeline

End use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Lighting retrofits				
Lighting lamp/ballast/ fixture upgrades	Lighting distributors, installation contractors 2007 California Lighting Efficiency and Toxics Reduction Act Title 24 (Title 24-2008 is effective 8/1/2009) Energy Independence and Security Act of 2007 IESNA	Expand incentives to include additional high-efficiency lamp/ballast configurations (e.g. 8-lamp T5 high output High-Bays, LED). Phase out incentives for any measures as they become required or the only option available for purchase (market is transformed).	Continue to support, expand and evolve list of other FinAnswer Express lighting measures, particularly new lamp/ballast technologies and LEDs. Phase out any measures as they are incorporated into codes, standards, etc.	Continue to support, expand and evolve list of other FinAnswer Express lighting measures. Phase out any measures as they are incorporated into codes, standards, etc.
Lighting controls		Continue to support and offer incentives for lighting controls added to existing lighting	Continue to support and offer incentives for lighting and daylighting controls until the market is transformed	Continue to support and offer incentives for lighting and daylighting controls until the market is transformed
Daylighting controls		Offer incentives for daylighting controls added to existing lighting.		

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Motors				
Premium efficiency motors	<p>Motor vendors</p> <p>Energy Security and Independence Act - requires all new 1-500 horsepower (hp) motors manufactured and sold in the U.S. starting 12/19/2010 to meet NEMA Premium efficiency standards.</p> <p>National Electric Manufacturer's Association (NEMA) efficiency standard – NEMA MG 1-2006 Revision 1-2007</p> <p>Green Motors Practices Group</p>	<p>Expand incentives for premium efficiency motors to include motors up to 500 hp to align with NEMA MG 1-2006 Revision 1-2007.</p>	<p>All new 1-500 hp motors purchased will be required to meet NEMA Premium efficiency standards, so incentives are no longer required unless a higher efficiency option is introduced.</p>	<p>All new 1-500 hp motors purchased will be required to meet NEMA Premium efficiency standards, so incentives are no longer required unless a higher efficiency option is introduced.</p>
		<p>Offer incentives for premium efficiency motors until 12/19/2010 when motors will be required to meet NEMA Premium standards.</p>		
		<p>Add incentives for Green Motor Rewinds to help retain the efficiency of existing motors that get rewound.</p>	<p>Continue to support and evolve Green Motor Rewinds to help retain the efficiency of existing motors that get rewound.</p>	<p>Continue to support and evolve Green Motor Rewinds to help retain the efficiency of existing motors that get rewound.</p>
Other motor measures	<p>Vendors</p> <p>Consortium for Energy Efficiency, other recognized organizations</p>	<p>Continue to support, expand and evolve list of other FinAnswer Express motor measures (i.e. Escalator Motor Controllers). Phase out any measures as they are incorporated into codes, standards, etc. (i.e. ECM motors in New Construction)</p>	<p>Continue to support, expand and evolve list of other FinAnswer Express motor measures. Phase out any measures as the market is transformed.</p>	<p>Continue to support, expand and evolve list of other FinAnswer Express motor measures. Phase out any measures as the market is transformed.</p>
Motor systems	<p>Vendors</p> <p>Consortium for Energy Efficiency, other recognized organizations</p>	<p>Continue to provide technical services to identify motor system efficiency opportunities. Provide incentives.</p>	<p>Continue to provide technical services to identify motor system efficiency opportunities. Provide incentives until measures become standard practice (market is transformed).</p>	<p>Continue to provide technical services to identify motor system efficiency opportunities. Provide incentives until measures become standard practice (market is transformed).</p>

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
HVAC				
<p>HVAC equipment</p> <p>Unitary air conditioners, heat pumps, variable frequency drives for HVAC fans and pumps, etc. (refer to FinAnswer Express incentive tables for complete list)</p>	<p>Vendors, installation contractors</p> <p>Title 24 (Title 24-2008 is effective 8/1/2009)</p> <p>Big Bold HVAC initiatives</p> <p>Consortium for Energy Efficiency</p> <p>IECC</p> <p>Federal minimum efficiency standards</p> <p>Energy Independence and Security Act of 2007 provides the authority to DOE to consider separate regional efficiency standards for furnaces, central air conditioners, heat pumps.</p> <p>ARI Standard 340/360-2007 sunsets the use of IPLV ratings for > 65,000 btu/hr in favor of an IEER rating</p>	<p>Modify measures as needed to align with Title 24-2008, which is effective 8/1/2009.</p> <p>Revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives (i.e. Advanced Rooftop Unit Specification and Recommissioning)</p>	<p>Continue to revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives (i.e. Advanced Rooftop Unit Specification and Recommissioning)</p>	<p>Continue to revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives</p>
<p>HVAC systems</p>	<p>Vendors, installation contractors</p> <p>Title 24 (Title 24-2008 is effective 8/1/2009)</p> <p>Consortium for Energy Efficiency, other recognized organizations</p> <p>ASHRAE 90.1-2007</p>	<p>Continue to provide technical services to identify HVAC system efficiency opportunities. Provide incentives.</p>	<p>Continue to provide technical services to identify HVAC system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.</p>	<p>Continue to provide technical services to identify HVAC system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.</p>

End Use	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Building Envelope				
Cool roofs	Title 24 (Title 24-2008 is effective 8/1/2009) ASHRAE 90.1-2007 ENERGYSTAR	Modify to limit eligibility to low-slope roofs in climate zones 1 and 16 to align with Title 24-2008. Support and evolve to stay ahead of code.	Support and evolve to stay ahead of code.	Support and evolve to stay ahead of code.
Roof insulation		Add measures that exceed Title 24-2008 to the program. Revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives.	Revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives.	Revise measures as needed to exceed code, align with any new rating criteria, and align with any higher voluntary standards/initiatives.
Wall insulation				
High efficiency windows				
Reflective window film				
Food Service				
Commercial Food Service Equipment	ENERGYSTAR Food Service Technology Center Consortium for Energy Efficiency	Add Food Service measures that meet or exceed ENERGYSTAR or other voluntary high-efficiency specifications	Continue to evolve food service measures as markets are transformed.	Continue to evolve food service measures as markets are transformed.
New Construction				
Measures, whole building	Design professionals Title 24 (Title 24-2008 is effective 8/1/2009)	Continue to provide options to help customers exceed code: Express prescriptive incentives; Design assistance, design team incentives, sliding scale customer incentives.	Incorporate any voluntary standards introduced by statewide initiatives as appropriate. Evolve the program to continually challenge the market to exceed code by higher percentages.	Evolve the program to continually challenge the market to exceed code by higher percentages.

4. Industrial sector

4.1. Vision – same as California’s Long Term Energy Efficiency Strategic Plan

California industry will be vibrant, profitable and exceed national benchmarks for energy efficiency and resource management.

4.2. Strategy – The potential study data excerpt below indicates the largest industrial DSM potential is in compressed air, pumping, and process loads. The company’s strategy is to focus on these end uses while adding to programs over time to be as comprehensive as possible.

4.3. Industrial profile

4.3.1. Customer counts and 2008 kWh by rate schedule

Rate Description	Billing Count	2008 kWh
SCHEDULE A32-GENERAL SERVICE	28	2,102,274
SCHEDULE 25-GENERAL SERVICE	96	752,696
SCHEDULE A36-LARGE GENERAL SERVICE	15	6,093,363
SCHEDULE 48T-LARGE GENERAL SERVICE	5	48,699,760
UNBILLED		11,000
LESS MULTIPLE BILLINGS	-8	
	136	57,659,093

4.3.2. Potential study excerpt – industrial data for California, 2009 to 2020

		Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales	Resource Cost Levelized \$/kWh
Industrial							
by end use	Process AirComp	9,271,267	1,106,197	1,106,197	707,966	7.6%	\$0.01
	Other	6,301,993	1,043,076	1,043,076	667,569	10.6%	\$0.00
	Pumps	16,039,175	993,983	993,983	636,149	4.0%	\$0.04
	Process Heat	3,319,271	554,014	554,014	354,569	10.7%	\$0.00
	Motors Other	18,164,634	539,412	539,412	345,223	1.9%	\$0.02
	Fans	6,801,957	256,862	256,862	164,392	2.4%	\$0.03
	HVAC	4,377,513	397,619	245,593	157,180	3.6%	\$0.05
	Lighting	4,750,348	219,799	219,799	140,671	3.0%	\$0.01
	Process Cool	455,996	120,353	120,353	77,026	16.9%	\$0.00
	Process Refrig	2,958,269	73,474	73,474	47,023	1.6%	\$0.01
	Process Other	110,909	28,088	28,088	17,976	16.2%	\$0.01
	Indirect Boiler	424,774	0	0	0	.	.
Process Electro Chemical	13,153	0	0	0	.	.	
by segment	Lumber Wood Products	61,488,722	4,068,333	3,916,307	2,506,437	4.1%	\$0.01
	Water	6,968,462	974,402	974,402	623,617	8.9%	\$0.05
	Wastewater	3,378,064	244,792	244,792	156,667	4.6%	\$0.04
	Miscellaneous Mfg	1,154,011	45,350	45,350	29,024	2.5%	\$0.02

4.3.3. Current programs

- FinAnswer Express (Schedule A-115) – prescriptive incentives (\$/fixture, \$/motor, \$/ton). Refer to the program brochures in the appendix or www.pacificpower.net/casave
- Energy FinAnswer (Schedule A-125) – technical services, custom incentives. Refer to the program brochures in the appendix or www.pacificpower.net/casave

4.4. Industrial implementation plan and timeline

End Use	Partners	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Small compressed air systems	Vendors Energy Trust of Oregon Small Industrial Initiative DOE Best Practices, Compressed Air Challenge	Add prescriptive measures for small compressed air systems and build and support vendor networks for delivery. Align with Energy Trust approach where appropriate.	Continue to evolve a simplified approach for small systems	Continue to evolve a simplified approach for small systems
Medium/large compressed air systems	Energy engineers, vendors DOE Best Practices, Compressed Air Challenge	Continue to provide technical services to identify system efficiency opportunities. Provide incentives.	Continue to provide technical services to identify system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.	Continue to provide technical services to identify system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.
Pumps, fans, refrigeration systems, other process	Vendors Energy engineers DOE Best Practices Food processor associations	Continue to provide technical services to identify system efficiency opportunities. Provide incentives.	Continue to provide technical services to identify system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.	Continue to provide technical services to identify system efficiency opportunities. Provide incentives until measures become standard practice and the market is transformed.
Lighting				
(See information in Commercial section above for lighting.)				

End Use	Partners	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Premium efficiency motors	<p>Motor vendors</p> <p>Energy Security and Independence Act - requires all new 1-500 horsepower (hp) motors manufactured and sold in the U.S. starting 12/19/2010 to meet NEMA Premium efficiency standards.</p> <p>National Electric Manufacturer's Association (NEMA) efficiency standard – NEMA MG 1-2006 Revision 1-2007</p>	<p>Expand incentives for premium efficiency motors to include motors up to 500 hp to align with NEMA MG 1-2006 Revision 1-2007.</p>	<p>All new 1-500 hp motors purchased will be required to meet NEMA Premium efficiency standards, so incentives are no longer required unless a higher efficiency option is introduced.</p>	<p>All new 1-500 hp motors purchased will be required to meet NEMA Premium efficiency standards, so incentives are no longer required unless a higher efficiency option is introduced.</p>
		<p>Offer incentives for premium efficiency motors until 12/19/2010 when motors will be required to meet NEMA Premium standards.</p>		
		<p>Add incentives for Green Motor Rewinds to help retain the efficiency of existing motors that get rewound.</p>		
Motor systems, variable frequency drives, other motor measures	<p>Green Motors Practices Group</p> <p>Consortium for Energy Efficiency</p> <p>DOE Best Practices, Motor Decisions Matter</p> <p>Other recognized organizations</p>	<p>Continue to provide technical services to identify motor system efficiency opportunities. Provide incentives. Continue to support, expand and evolve list of other FinAnswer Express motor measures. Phase out any measures as they are incorporated into codes, standards, etc.</p>	<p>Continue to support, expand and evolve list of other FinAnswer Express motor measures. Phase out any measures as the market is transformed.</p>	<p>Continue to support, expand and evolve list of other FinAnswer Express motor measures. Phase out any measures as the market is transformed.</p>

End Use	Partners	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Other				
Continuous Energy Improvement Benchmarking	Northwest Energy Efficiency Alliance, industrial sector DOE ENERGY STAR	Evaluate, incorporate as appropriate Provide customers (and the industries that serve them) with information on energy efficiency education opportunities	Continue to provide customers and industry with information on energy efficiency education opportunities	Continue to provide customers and industry with information on energy efficiency education opportunities
AB 32 Greenhouse gas rules	California Air Resources Board AB 32 requirements	Review statewide efforts, incorporate as appropriate	Ongoing	Ongoing
New Construction				
Measures, Whole building	Design professionals Title 24 (Title 24-2008 is effective 8/1/2009) 2007 California Lighting Efficiency and Toxics Reduction Act Energy Independence and Security Act of 2007	Continue to provide options to help customers exceed code: Express prescriptive incentives; Design assistance, design team incentives, sliding scale customer incentives	Incorporate any voluntary standards introduced by statewide initiatives	Incorporate any voluntary standards introduced by statewide initiatives

5. Irrigation sector

5.1. Vision – same as California’s Long Term Energy Efficiency Strategic Plan

Energy efficiency will support the long-term economic and environmental success of California agriculture.

5.2. Strategy – The potential study data excerpt below indicates the largest irrigation DSM potential is in pumping. The company’s strategy is to focus on pumping and water distribution systems.

5.3. Profile

5.3.1. Customer counts and 2008 kWh by rate schedule

Rate Description	Billing Count	2008 kWh
SCHEDULE 20-AGRICULTURAL PUMPING	1,347	69,209,772
SCHEDULE 40-KLAMATH IRRIGATION	677	30,820,177
UNBILLED		-3,000
LESS MULTIPLE BILLINGS	-181	
	1,843	100,026,949

5.3.2. Potential study excerpt – irrigation data for California, 2009 to 2020

Potential study excerpt – irrigation data for California, 2009 to 2020

		Baseline Sales (kWh)	Technical Potential (kWh)	Economic Potential (kWh)	Achievable Potential (kWh)	Achievable as % of Baseline Sales	Resource Cost Levelized \$/kWh
Irrigation							
byenduse	Pumps	84,512,432	8,527,709	5,432,977	3,477,105	4.1%	\$0.03
	Other	9,390,270	0	0	0	.	.
bysegment	Irrigation	93,902,702	8,527,709	5,432,977	3,477,105	3.7%	\$0.03

5.4. Irrigation implementation plan

Strategies	Partners, resources	Near Term 2009 - 2011	Mid-Term 2012 - 2015	Long Term 2016 - 2020
Irrigation systems	Vendors, pump service companies Energy Trust of Oregon Small Industrial Initiative	Expand the list of prescriptive measures and support vendor networks for delivery. Align with Energy Trust approach where appropriate.	Continue to expand the list of prescriptive measures and support vendor networks for delivery. Align with Energy Trust approach where appropriate.	Continue to expand the list of prescriptive measures and support vendor networks for delivery. Align with Energy Trust approach where appropriate.

6. References

In preparing this white paper, PacifiCorp used many resources including the following:

- California Long Term Energy Efficiency Strategic Plan, September 2008 information on www.CaliforniaEnergyEfficiency.com
- Participation in stakeholder input sessions
- PacifiCorp's Integrated Resource Plan – information at <http://www.pacificorp.com/Navigation/Navigation23807.html>
- PacifiCorp's Assessment of Long-Term System-Wide Potential for Demand-Side and Other Supplemental Resources – information at <http://www.pacificorp.com/Article/Article75535.html>
- Experience implementing energy efficiency programs in California and other states
- Experience with Northwest Energy Efficiency Alliance market transformation initiatives

7. Appendix

Appendix 1 - Current FinAnswer Express program brochure and incentive tables for retrofits (also available on the company's Web site <http://www.pacificpower.net/File/File80925.pdf>)

Appendix 2 - Current FinAnswer Express program brochure and incentive tables for new construction/major renovation (also available on the company's Web site <http://www.pacificpower.net/File/File80924.pdf>)

Appendix 3 - Current Energy FinAnswer program brochure (also available on the company's Web site <http://www.pacificpower.net/File/File80923.pdf>)

7.1. Commission decision

ALJ/KJB/jt2

Date of Issuance 2/1/2008

Decision 08-01-041 January 31, 2008

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of PacifiCorp (U901E), an Oregon Company, for Approval of New Energy Efficiency Programs and Other Matters.

Application 07-07-011

(Filed July 16, 2007)

OPINION APPROVING APPLICATION FOR NEW ENERGY EFFICIENCY PROGRAMS AS MODIFIED BY SETTLEMENT WITH THE DIVISION OF RATEPAYER ADVOCATES

Excerpt from Settlement with DRA:

Development of Long-Term Strategic Plan

PacifiCorp agrees to submit to DRA by February 28, 2009 a white paper which sets forth PacifiCorp's long-term strategic plan for energy efficiency in its California service territory for each of its customer sectors (residential, commercial, industrial) through 2020. PacifiCorp agrees to participate as a stakeholder in the current energy efficiency planning process that is a component of rulemaking R.06-04-010 to assist in informing the development of its long-term strategic plan. To the extent feasible, the white paper will reflect concepts and guidance documents from R.06-04-010, adapted as relevant to PacifiCorp's programs. PacifiCorp agrees to provide DRA a draft of the white paper for comment by January 31, 2009, post the completed white paper on its website, submit it to the Commission's Energy Division and attach it to its next energy efficiency application.

A change can do you good



FinAnswer® Express
California
Retrofit incentives





Pictured above: Lori Sanders, Pacific Power Energy Efficiency Alliance; Chuck Hinckley, Gear Jammer

Gear Jammer

“Pacific Power’s participation made the payback into something that was reasonable. No matter what your finances are, if you can get your money back quickly, then it just makes sense.”

Chuck Hinckley
President
Gear Jammer Travel Plaza

Gear Jammer Travel Plaza in Union Gap, Washington was ready for a lighting upgrade. But different parts of the facility had different needs – cleaner, brighter lighting in the office, restaurant and the retail store, lower light in the bar. Adding to the challenge: Gear Jammer is open 24 hours a day, seven days a week. Flexibility became a key word. Enter Pacific Power’s FinAnswer® Express and a Energy Efficiency Alliance lighting contractor. The lighting upgrades were carefully planned according to location and savings calculated. The lighting contractor’s team was also able to work around Gear Jammer’s busy customer traffic, ensuring business wasn’t disrupted. The measures installed with the help of FinAnswer Express are saving Gear Jammer nearly \$5,000 yearly in energy costs. And with the incentives, the project’s simple payback was cut to just two years.

FinAnswer® Express – California

Is it costing more to run your facility than it should?

If your lighting, HVAC, motors and other equipment haven’t been upgraded recently, the answer is probably “yes.” We have a brilliant solution for you. With FinAnswer® Express, one of our energy efficiency programs for California business customers, we can help you upgrade to energy-efficient lighting; comfortable, energy-saving heating and cooling; premium-efficiency motors; and other cost-saving measures.

Surprising as it may sound, we’d like to help you use less energy.

Using less will not only save you money, it can enhance your employees’ comfort, productivity and efficiency. Good news for your bottom line. And it’s good for all of us and the environment. Participating in energy efficiency programs helps shrink our carbon footprint and is one of the lowest cost resources to meet future energy needs. Just how good does it get?

FinAnswer Express includes incentives and technical expertise

The incentives apply to lighting, motors, mechanical and other equipment upgrades that increase your electric energy efficiency and exceed code requirements – both retrofits of existing equipment and new construction/major renovation are eligible.* The incentive amount is based on the equipment installed, so see the incentive tables for a complete list of equipment included in the program. Plus, we provide technical expertise to help you weigh your options. You can choose a Pacific Power Energy Efficiency Alliance vendor or an independent energy consultant for technical expertise.

How it works

Lighting retrofits

- Step 1** Contact us or an Energy Efficiency Alliance vendor if you’d like help getting started.
- Step 2** Obtain an incentive application and catalog from us or your Energy Efficiency Alliance vendor.
- Step 3** Upgrade your lighting.
- Step 4** Submit incentive application and project cost documentation, including invoices with breakdown of materials and labor, and contact us or your Energy Efficiency Alliance vendor for a post-installation inspection.
- Step 5** Receive your incentive check within 45 days of completion of Step 4.

Pre-approval is recommended but not required for lighting retrofits.

Non-lighting retrofits

Step 1 Obtain an incentive application and catalog from us or your dealer.

Step 2 Purchase and install a qualifying unit for use at an eligible location.

Step 3 Submit your incentive application.

Step 4 Receive your incentive check within 45 days of completion of Step 3.

Pre-approval is recommended but not required for chiller incentive applications.

Premium efficiency motors may be installed or placed in inventory.

Doing something that's not on the list? Contact us before you start your project. It may qualify for a custom incentive.

Do the bright thing

- Call our **Energy Services Hotline** at **1-800-222-4335**.
- E-mail us at **energy.expert@pacificcorp.com**.
- Visit our Web site at **www.pacificpower.net/casave**.
A list of Energy Efficiency Alliance vendors, incentive applications, incentive tables, and case studies are available on our Web site.

For a copy of the California tariff, visit the California information at **www.pacificpower.net/regulation** and go to Schedule A-115.

** Certain restrictions apply for new construction and major renovations since incentives are for upgrades that exceed energy code requirements. See our FinAnswer Express brochure for new construction and major renovations. Pacific Power's Energy FinAnswer® incentive program is available for more comprehensive projects. Customers can receive one incentive per project. Contact us or visit www.pacificpower.net/casave for details.*



Pictured above left to right: Tim McCarthy, Walla Walla support services director; Bill Clemens, Pacific Power regional community manager; and Duane Cole, Walla Walla city manager.

City of Walla Walla

“It's been a great partnership. We're building a new fire station this year and we've already looked into ways to engage Pacific Power in the design process so that we can make it energy efficient.”

Duane Cole
City Manager
City of Walla Walla

In Washington officials and staff at the City of Walla Walla are always looking for ways to take control of energy use at city-owned facilities. Along with being fiscally sound, using energy wisely helps them set a good example for the entire community. City staff sat down with Pacific Power and its consultant and found that FinAnswer Express could help not only save energy and costs, but improve the quality of lighting in their buildings as well. The city switched to more efficient lighting at city hall, the senior center, the service center and Fire Station #1. The changes are saving the City of Walla Walla nearly \$6,000 per year in energy costs. And incentives lowered the city's simple payback to just over two years.

Incentives for lighting retrofits in California

Category	Replace	With	Customer Incentive
Fluorescent Fixture Upgrade to Standard T8 Fixtures [Standard T8 lamps and electronic ballasts with ballast factor (BF) ≤ 0.88]	4'-1 or 2 T12 lamp(s) + 1 magnetic ballast (MB)	4'-1 or 2 T8 lamps + 1 electronic ballast (EB)	\$5
	4'-3 or 4 T12 lamp(s) + MB(s)	4'-3 or 4 T8 lamps + EB	\$10
	8'-1 or 2 T12 lamp(s) + MB(s)	4'-2, 3, or 4 T8 lamps + EB	\$10
	8'-1, 2, 3 or 4 T12 lamps + MB(s)	8'-1, 2, 3 or 4 T8 lamps + EB	\$10
	8'-1, 2, 3 or 4 T12 HO/VHO lamps + MB(s)	8'-1, 2, 3 or 4 T8 HO/VHO lamps + EB(s)	\$15
Fluorescent Fixture Upgrade to 4' Premium T8 Fixtures [Lamps with initial lumens ≥ 3100 or wattage ≤ 30 W; electronic ballasts with BF ≤ 0.8]	4'-1 or 2 T12 lamp(s) + MB or Standard T8 lamp(s) + EB	4'-1 or 2 premium T8 lamp(s) + EB	\$10
	4'-3 or 4 T12 lamps + MB(s) or Standard T8 lamps + EB	4'-3 or 4 premium T8 lamps + EB	\$15
	8'-1 or 2 T12 lamp(s) + MB(s)	4'-2, 3 or 4 premium T8 lamps + EB	\$20
Fluorescent Delamping and Standard T8 Fixture Upgrade [Standard T8 lamps and electronic ballasts with BF ≤ 0.88 - Fixture removal is not eligible]	4'-2 T12 lamps + MB	4'-1 standard T8 lamp + EB	\$10
	4'-3 T12 lamps + MB(s)	4'-2 or 1 standard T8 lamp + EB	\$15
	4'-4 T12 lamps + MB(s)	4'-3 standard T8 lamps + EB	\$15
	4'-4 T12 lamps + MB(s)	4'-2 or 1 standard T8 lamp + EB	\$25
Fluorescent Delamping and Premium T8 Fixture Upgrade [Lamps with initial lumens ≥ 3100 or wattage ≤ 30 W; electronic ballasts with BF ≤ 0.8. Fixture removal is not eligible]	4'-2 T12 lamps + MB	4'-1 premium T8 lamp + EB	\$15
	4'-3 T12 lamps + MB(s)	4'-2 or 1 premium T8 lamp + EB	\$20
	4'-4 T12 lamps + MB(s)	4'-3 premium T8 lamps + EB	\$20
	4'-4 T12 lamps + MB(s)	4'-2 or 1 premium T8 lamp + EB	\$30
T8 Fluorescent Lamp Upgrade	≥ 32 W T8 lamp	≤ 30 W T8 lamp, see note 4	\$0.50
Compact Fluorescent Lighting (CFL) - hardwire fixtures	Incandescent	< 10 W (nominal) CFL hardwire fixture	\$10
	Incandescent	≥ 10 W and < 20 W (nominal) CFL hardwire fixture	\$15
	Incandescent	≥ 20 W (nominal) CFL hardwire fixture	\$20
T5 Fluorescent Fixture Upgrade	≥ 250 W metal halide (MH), mercury vapor (MV) or high pressure sodium (HPS)	3 T5HO lamps (nominal 4') + EB (high bay)	\$70
	≥ 400 W MH, MV or HPS	4, 5, or 6 T5HO lamps (nominal 4') + EB(s) (high bay)	\$75
	4'-4 T12 lamps + MB(s)	2 T5 lamps (nominal 4') + EB (interior fixtures)	\$30
	4'-4 T12 lamps + MB(s)	2 T5HO lamps (nominal 4') + EB (interior fixtures)	\$25
High Intensity Discharge Upgrades (based on lamp wattages)	Incandescent or tungsten	≤ 100 W ceramic metal halide	\$25
	≥ 400 W MH, MV or HPS	≤ 320 W ceramic metal halide	\$100
	≥ 750 W MH, MV or HPS	≤ 400 W ceramic metal halide	\$120
	≥ 150 W and ≤ 250 W MH, MV or HPS or ≥ 150 W incandescent	≥ 125 W and ≤ 175 W pulse start MH	\$60
	> 250 W and ≤ 400 W MH, MV or HPS	≥ 175 W and ≤ 320 W pulse start MH	\$75
	> 400 W MH, MV or HPS	≤ 400 W pulse start MH	\$100
	≥ 1000 W MH, MV or HPS	≤ 750 W pulse start MH	\$100
	≥ 250 W and < 750 W MH, MV or HPS	4'-4, 5 or 6 T8 lamps + EB(s) (high bay)	\$75
≥ 750 W MH, MV or HPS	4'-8 T8 lamps + EB(s) (high bay)	\$100	
Exit Signs	Incandescent or fluorescent exit signs	Light-emitting diode (LED) or electro luminescent exit sign – 1 or 2 faced	\$15
Lighting Controls	Wall switch or no control	Wall or ceiling mounted occupancy sensor (per sensor)	\$30
	No control	Integral occupancy sensor	\$25
	No control	Photocell (per sensor)	\$20
	No control	Time clock (per control)	\$20
Light-Emitting Diode (LED) Lighting	Indoor incandescent, neon or fluorescent signage	LED channel letter signage ≤ 2' high	\$4/linear foot
		LED channel letter signage > 2' high	\$6/linear foot
	Outdoor incandescent, neon or fluorescent signage	LED channel letter signage ≤ 2' high	\$2/linear foot
		LED channel letter signage > 2' high	\$3/linear foot
	Incandescent, neon or fluorescent	LED fixed or scrolling message center signage	see note 7

Requirements for retrofits of existing lighting: To be eligible for the incentives listed, new fixtures must use less energy than the fixtures they replaced. For additional requirements, please refer to the lighting table notes on the next page.

Notes for retrofit lighting incentive table:

1. Incentives are capped at 50 percent of eligible project costs, and incentives will not be available to reduce the project simple payback below one year.
2. Two-foot u-tube lamps may be substituted for 4' linear fluorescent lamps in the lighting incentive table.
3. For retrofits of existing equipment, lighting incentives will be paid on a one-for-one equipment replacement basis. If fixture counts are changing, the project may be eligible for a custom incentive.
4. Incentives for T8 fluorescent lamp upgrades may not be combined with other fluorescent fixture incentives and will only be paid once per facility.
5. Eight-foot T8 high output/very high output (HO/VHO) and high bay T8 electronic ballasts are required to have a ballast factor of less than or equal to 1.2 to be eligible for incentives. Maximum of two electronic ballasts per fixture.
6. To determine the length of light-emitting diode channel letter signs, measure the length of individual letter at the centerline and add the individual values; do not measure the distance between letters.
7. Light-emitting diode fixed or scrolling message center signage incentives are \$0.08 per kilowatt-hour of annual energy savings – see note 1. Savings is subject to Pacific Power approval.
8. Light-emitting diode traffic light upgrades are not eligible for incentives.
9. Lighting equipment listed only in the “replace” column is not eligible for incentives.
10. Incentives for lighting retrofits are available via a post-purchase application. Pre-approval is recommended but not required.

Incentives for HVAC and refrigeration energy efficiency retrofits

Equipment Type	Size Category	Sub-Category	Minimum Efficiency Requirement	ARI Standard	Customer Incentive
Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode)	< 65,000 Btu/hr	Split system and single package (single phase)	15.0 SEER and 12.5 EER	210/240	\$50/ton
	< 65,000 Btu/hr	Split system and single package (three phase)	13.0 SEER and 11.6 EER	210/240	\$50/ton
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Split system and single package	11.0 EER and 11.4 IPLV	210/240	\$50/ton
	≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split system and single package	10.8 EER and 11.2 IPLV	340/360	\$50/ton
	≥ 240,000 Btu/hr	Split system and single package	10.0 EER and 10.4 IPLV	340/360	\$50/ton
Unitary Commercial Air Conditioners, Water and Evaporatively Cooled	< 135,000 Btu/hr	Split system and single package	14.0 EER	210/240	\$50/ton
	≥ 135,000 Btu/hr	Split system and single package	14.0 EER	340/360	\$50/ton
Package Terminal Air Conditioners (PTAC) (Heating & Cooling Mode)	≤ 8,000 Btu/hr	Single package	11.8 EER and 3.3 COP Heating	310/380	\$50/ton
	> 8,000 and < 10,500 Btu/hr	Single package	11.4 EER and 3.2 COP Heating	310/380	\$50/ton
	≥ 10,500 and ≤ 13,500 Btu/hr	Single package	10.7 EER and 3.1 COP Heating	310/380	\$50/ton
	> 13,500 Btu/hr	Single package	10.0 EER and 3.0 COP Heating	310/380	\$50/ton
Heat Pumps, Air Cooled (Cooling Mode)	< 65,000 Btu/hr	Split system and single package (single phase)	15.0 SEER and 12.5 EER	210/240	\$50/ton
	< 65,000 Btu/hr	Split system and single package (three phase)	13.0 SEER and 11.6 EER	210/240	\$50/ton
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Split system and single package	11.0 EER and 11.4 IPLV	210/240	\$50/ton
	≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split system and single package	10.8 EER and 11.2 IPLV	340/360	\$50/ton
	≥ 240,000 Btu/hr	Split system and single package	10.0 EER and 10.4 IPLV	340/360	\$50/ton
Heat Pumps, Air Cooled (Heating Mode)	< 65,000 Btu/hr	Split system (single phase)	8.5 HSPF	210/240	See note 3
		Single package (single phase)	8.0 HSPF	210/240	See note 3
	< 65,000 Btu/hr	Split system (three phase)	8.0 HSPF	210/240	See note 3
		Single package (three phase)	7.5 HSPF	210/240	See note 3
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	47°F db /43°F wb outdoor air	3.4 COP	340/360	See note 3
		17°F db /15°F wb outdoor air	2.4 COP	340/360	See note 3
	≥ 135,000 Btu/hr	47°F db /43°F wb outdoor air	3.3 COP	340/360	See note 3
17°F db /15°F wb outdoor air		2.2 COP	340/360	See note 3	
Heat Pumps, Water Source (Cooling Mode)	< 135,000 Btu/hr	85°F entering water	14.0 EER	320	\$50/ton
Heat Pumps, Water Source (Heating Mode)	< 135,000 Btu/hr	70°F entering water	4.6 COP	320	See note 3
Evaporative Cooling	All	Direct or indirect	Industry Standard Rating (ISR)		\$0.02/ISR CFM
Programmable Thermostats	All sizes with non-programmable thermostat for air conditioner	Programmable thermostat for air conditioner	Must comply with 2006 ENERGY STAR [®] requirements and not be required by code		\$50/thermostat
		Optimizer programmable thermostat for heat pumps or all electric heating	Must comply with 2006 ENERGY STAR [®] requirements and not be required by code		\$70/thermostat
Chillers	All except chillers intended for backup service only	Serving primarily occupant comfort cooling loads (no more than 20% for process cooling loads)	Must exceed minimum efficiencies required by energy code		See note 4
Variable-Frequency Drive HVAC fans and pumps	≤ 100 horsepower	HVAC fans and pumps			\$65/horsepower
Occupancy Based PTHP/PTAC control	All sizes with no prior occupancy based control		See note 6		\$50/controller
Electronically Commutated Motor	≤ 1 horsepower	Refrigeration application			\$0.50/watt
		HVAC application			\$50/horsepower
Solid Door Refrigerator	≤ 30 cubic feet volume (V)		Maximum kwh/day = 0.06*V+1.22		\$50/unit
	31– 60 cubic feet		Maximum kwh/day = 0.06*V+1.22		\$70/unit
	≥ 61 cubic feet		Maximum kwh/day = 0.06*V+1.22		\$90/unit
Solid Door Freezer	≤ 30 cubic feet volume (V)		Maximum kwh/day = 0.28*V+0.97		\$150/unit
	31– 60 cubic feet		Maximum kwh/day = 0.28*V+0.97		\$175/unit
	≥ 61 cubic feet		Maximum kwh/day = 0.28*V+0.97		\$200/unit

Notes for mechanical and other energy efficiency measures incentives table:

- For retrofits of existing equipment, incentives are for one-for-one same-size equipment replacements. Exception: PTACs can replace electric resistive heating, which must be removed.
- Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive.
- Incentives for heat pumps are \$50 per ton of cooling capacity ONLY. No incentives are paid per ton of heating capacity. Heat pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per-ton cooling efficiency incentives.
- \$0.12/kWh annual energy savings + \$50/kW. Chiller energy and demand savings subject to approval by Pacific Power.
- Throttling or bypass devices, such as inlet vanes, bypass dampers, three-way valves or throttling valves must be removed or permanently disabled to qualify for HVAC fan and pump VFD incentives. VFDs required by energy code are not eligible for incentives. Savings will only be realized for installations where a variable load is present.
- Controller units must include an occupancy sensor and include the capability to set back the zone temperature during extended unoccupied periods and set up the temperature once the zone is occupied.
- Incentives for all mechanical and other equipment listed in the incentive table are available via a post-purchase application process.

SEER = Seasonal Energy Efficiency Ratio
 EER = Energy Efficiency Ratio
 COP = Coefficient of Performance
 HSPF = Heating Seasonal Performance Factor
 IPLV = Integrated Part Load Value
 PTHP = Packaged Terminal Heat Pump
 PTAC = Packaged Terminal Air Conditioner
 HVAC = Heating, Ventilating and Air Conditioning
 VFD = Variable-Frequency Drive
 ARI = Air-Conditioning and Refrigeration Institute

Incentives for premium efficiency motors

Horsepower	Customer Incentive (\$/motor)	Nominal Full Load Efficiencies (%)					
		1200 RPM		1800 RPM		3600 RPM	
		Open Drip-proof (ODP)	Totally Enclosed Fan-cooled (TEFC)	Open Drip-proof (ODP)	Totally Enclosed Fan-cooled (TEFC)	Open Drip-proof (ODP)	Totally Enclosed Fan-cooled (TEFC)
1	\$45	82.5	82.5	85.5	85.5	77.0	77.0
1.5	\$45	86.5	87.5	86.5	86.5	84.0	84.0
2	\$54	87.5	88.5	86.5	86.5	85.5	85.5
3	\$54	88.5	89.5	89.5	89.5	85.5	86.5
5	\$54	89.5	89.5	89.5	89.5	86.5	88.5
7.5	\$81	90.2	91.0	91.0	91.7	88.5	89.5
10	\$90	91.7	91.0	91.7	91.7	89.5	90.2
15	\$104	91.7	91.7	93.0	92.4	90.2	91.0
20	\$113	92.4	91.7	93.0	93.0	91.0	91.0
25	\$117	93.0	93.0	93.6	93.6	91.7	91.7
30	\$135	93.6	93.0	94.1	93.6	91.7	91.7
40	\$162	94.1	94.1	94.1	94.1	92.4	92.4
50	\$198	94.1	94.1	94.5	94.5	93.0	93.0
60	\$234	94.5	94.5	95.0	95.0	93.6	93.6
75	\$270	94.5	94.5	95.0	95.4	93.6	93.6
100	\$360	95.0	95.0	95.4	95.4	93.6	94.1
125	\$540	95.0	95.0	95.4	95.4	94.1	95.0
150	\$630	95.4	95.8	95.8	95.8	94.1	95.0
200	\$630	95.4	95.8	95.8	96.2	95.0	95.4

Notes for motors table:

1. Motors larger than 200 horsepower may be eligible for a custom incentive.
2. The National Electrical Manufacturers Association premium efficiency ratings listed are nominal full-load efficiency ratings. Motors that meet or exceed these efficiency requirements may qualify for an incentive. Motors that are installed or placed in inventory may qualify for incentives.
3. Motor incentives are available via a post-purchase incentive application process.

Incentives for other energy efficiency retrofits

Equipment Type	Size Category	Minimum Efficiency Requirement	Customer Incentive
Cool Roof	Roofing over spaces with mechanical cooling	Must comply with ENERGY STAR [®] reflective roof products requirements	\$0.10/square foot
Plug Load Occupancy Sensor			\$15/qualifying unit
Beverage vending machine or refrigerated display occupancy sensor	No occupancy sensor control	See note 3	\$75/sensor
Agricultural irrigation nozzles Standard or flow control brass nozzle	Replacing used nozzles installed on hand line, solid set, or wheel line system		\$0.68/nozzle, up to 100% of cost

Notes for other energy efficiency retrofits incentives table:

- For retrofits of existing equipment, incentives are for one-for-one same size equipment replacements.
- Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive.
- Intended for refrigerated vending machines and display cases containing only non-perishable bottled and canned beverages. Refurbished equipment that includes occupancy control is eligible.
- Incentives for all equipment listed in the above incentive table are available via a post-purchase application process.

Residential appliances purchased for use in a business

Equipment Type	Size Category	Minimum Efficiency Requirement	Customer Incentive
Clothes Washer		Tier 1 - Modified Energy Factor (MEF) 1.72 - 1.99	\$50/unit
		Tier 2 - MEF 2.0+	\$75/unit
Dishwashers		Energy Star qualified with an Energy Factor (EF) ≥ 0.68	\$20/unit
Refrigerators		Energy Star qualified	\$20/unit
Electric Water Heaters	40+ gallon tank	Energy Factor (EF) ≥ 0.93	\$40/unit
Residential Refrigerator/Freezer recycling*	10-30 cubic feet in size (based on inside measurements)	Must be in working condition and be plugged in to verify working condition	\$35/unit

Notes for residential appliances retrofit incentives table:

- For retrofits of existing equipment, incentives are for one-for-one same size equipment replacements.
- Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive.
- Incentives for all equipment listed in the above incentive table are available via a post-purchase application process. In addition, clothes washer recycling will be offered to customers who have operable or inoperable washing machines and who have purchased an Energy Star qualified replacement unit through the program. The incentive is \$25/unit and is paid to dealer.

MEF = Modified Energy Factor
EF = Energy Factor

A change can do you good

FinAnswer® Express California

New construction – major renovation





Pictured above left to right: Tim McCarthy, Walla Walla support services director; Bill Clemens, Pacific Power regional community manager and Duane Cole, Walla Walla city manager.

City of Walla Walla

“It’s been a great partnership. We’re building a new fire station this year and we’ve already looked into ways to engage Pacific Power in the design process so that we can make it energy efficient.”

Duane Cole
City Manager
City of Walla Walla,
Washington

Officials and staff at the City of Walla Walla are always looking for ways to take control of energy use at city-owned facilities. Along with being fiscally sound, using energy wisely helps them set a good example for the entire community. City staff sat down with Pacific Power and its consultant and found that FinAnswer Express could help not only save energy and costs, but improve the quality of lighting in their buildings as well.

FinAnswer® Express – California

Will it cost more to run your new facility than it should?

If the lighting, mechanical, motors and other equipment in your plans haven’t been upgraded, the answer is probably “yes.” We have a brilliant solution for you. With FinAnswer® Express, one of our energy efficiency programs for California business customers, we can help you upgrade to energy-efficient lighting; comfortable, energy-saving heating and cooling; premium-efficiency motors; and other cost-saving measures.

Surprising as it may sound, we’d like to help you use less energy.

Using less will not only save you money, it can enhance your employees’ comfort, productivity and efficiency. Good news for your bottom line. And it’s good for all of us and the environment. Participating in energy efficiency programs helps shrink our carbon footprint and is one of the lowest cost resources to meet future energy needs. Just how good does it get?

FinAnswer Express includes incentives and technical expertise

The incentives apply to lighting, motors, mechanical and other equipment upgrades that increase your electric energy efficiency and exceed code requirements – both new construction/major renovation and retrofits of existing equipment are eligible.* The incentive amount is based on the equipment installed, so see the incentive tables for a complete list of equipment included in the program. Plus, we provide technical expertise to help you weigh your options. You can choose a Pacific Power Energy Efficiency Alliance vendor or an independent energy consultant for technical expertise.

How it works

- Step 1** Contact us or an Energy Efficiency Alliance vendor if you’d like help getting started.
- Step 2** Obtain an incentive application and catalog from us or your dealer.
- Step 3** Purchase and install qualifying equipment at an eligible location.
- Step 4** Submit your incentive application.
- Step 5** Receive your incentive check within 45 days of completion of Step 4.

Pre-approval is recommended but not required for lighting and chiller incentive applications.



Pictured above: Lori Sanders, Pacific Power energy efficiency alliance; Chuck Hinckley, Gear Jammer

Doing something that's not on the list?

Contact us before you start your project. It may qualify for a custom incentive.

Here are some definitions used in the program:

New construction: a newly constructed facility or newly constructed square footage added to an existing facility

Major renovation: a change in facility use type or where the existing system will not meet owner/customer projected requirements within existing facility square footage

Retrofit: changes, modifications or additions to systems or equipment in existing facility square footage

Do the bright thing

- Call our **Energy Services Hotline** at **1-800-222-4335**.
- E-mail us at **energy.expert@pacificcorp.com**.
- Visit our Web site at **www.pacificpower.net/casave**.
Incentive tables, a list of Energy Efficiency Alliance vendors as well as incentive applications are available on our Web site.

For a copy of the Pacific Power tariff for this program, visit the California information at **www.pacificpower.net/regulation** and go to Schedule A-115.

** Certain restrictions apply for new construction/major renovation since incentives are for upgrades that exceed energy code requirements. For information on FinAnswer Express incentives for retrofits, see our FinAnswer Express retrofit incentive brochure. In addition to FinAnswer Express, we also have Energy FinAnswer for more comprehensive projects. Customers can receive one incentive per project. Contact us or visit www.pacificpower.net/casave for details.*

Gear Jammer

“Pacific Power’s participation made the payback into something that was reasonable. No matter what your finances are, if you can get your money back quickly, then it just makes sense.”

Chuck Hinckley
President
Gear Jammer Travel Plaza
Union Gap,
Washington

New construction and major renovation lighting incentives

Category	Install	Incentive
Premium T8 Fluorescent Fixture Upgrade [Lamps with initial lumens \geq 3100 or wattage \leq 30 W; electronic ballasts with ballast factor \leq 0.8]	4'-1 or 2 premium T8 lamp(s) + 1 electronic ballast (EB)	\$7
	4'-3 or 4 premium T8 lamps + EB	\$10
T5 Fluorescent Fixture Upgrade	2 T5 high output lamps (nominal 4') + EB (interior fixtures)	\$20
	3 T5 high output lamps (nominal 4') + EB (high bay)	\$40
	\geq 4 T5 high output lamps (nominal 4') + EB(s) (high bay)	\$60
	1 T5 lamp (nominal 4') + EB (interior fixtures)	\$10
	2 T5 lamps (nominal 4') + EB (interior fixtures)	\$25
	3 T5 lamps (nominal 4') + EB (interior fixtures)	\$30
T8 Fluorescent Fixture Upgrade (high bay)	4'- \geq 4 T8 lamps + EB(s) (high bay)	\$45
High Intensity Discharge Upgrades (based on lamp wattages)	\leq 100 W ceramic metal halide	\$20
	$>$ 100 W ceramic metal halide	\$40
	\geq 125 W pulse start metal halide	\$30
Lighting Controls	Integral occupancy sensor	\$25
Light Emitting Diode (LED) Lighting Channel letter signs	Indoor LED channel letter signage \leq 2' high	\$4/linear foot
	Indoor LED channel letter signage $>$ 2' high	\$6/linear foot
	Outdoor LED channel letter signage \leq 2' high	\$2/linear foot
	Outdoor LED channel signage $>$ 2' high	\$3/linear foot

Notes for new construction and major renovation lighting incentives:

- The date of the building permit application establishes the applicable version of the California energy code.
- The total connected interior lighting power for new construction/major renovation projects required to comply with the energy code must be 10 percent lower than the interior lighting power allowance calculated under the applicable version of the California energy code. For new construction/major renovation projects not required to comply with the energy code, the total connected lighting power must be 10 percent lower than common practice as determined by Pacific Power.
- Incentives are not available for lighting controls required under the applicable version of the California energy code.
- Two-foot u-tube lamps may be substituted for 4' linear fluorescent lamps in the above table.
- Electronic ballasts for high bay fixtures are required to have a ballast factor of less than or equal to 1.2 to be eligible for incentives.
- To determine the length of LED channel letter signs, measure the length of the individual letter at the centerline and add the individual values; do not measure the distance between letters.
- LED traffic light upgrades are not eligible for incentives.
- Incentives are available via a post-purchase incentive application process. Applying prior to placing purchase orders is recommended but not required.

New construction and major renovation Incentives for HVAC and refrigeration energy efficiency measures

Equipment Type	Size Category	Sub-Category	Minimum Efficiency Requirement	ARI Standard	Customer Incentive
Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode)	< 65,000 Btu/hr	Split system and single package (single phase)	15.0 SEER and 12.5 EER	210/240	\$50/ton
	< 65,000 Btu/hr	Split system and single package (three phase)	13.0 SEER and 11.6 EER	210/240	\$50/ton
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Split system and single package	11.0 EER and 11.4 IPLV	210/240	\$50/ton
	≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split system and single package	10.8 EER and 11.2 IPLV	340/360	\$50/ton
	≥ 240,000 Btu/hr	Split system and single package	10.0 EER and 10.4 IPLV	340/360	\$50/ton
Unitary Commercial Air Conditioners, Water and Evaporatively Cooled	< 135,000 Btu/hr	Split system and single package	14.0 EER	210/240	\$50/ton
	≥ 135,000 Btu/hr	Split system and single package	14.0 EER	340/360	\$50/ton
Package Terminal Air Conditioners (Heating & Cooling Mode)	≤ 8,000 Btu/hr	Single package	11.8 EER and 3.3 COP Heating	310/380	\$50/ton
	> 8,000 and < 10,500 Btu/hr	Single package	11.4 EER and 3.2 COP Heating	310/380	\$50/ton
	≥ 10,500 and ≤ 13,500 Btu/hr	Single package	10.7 EER and 3.1 COP Heating	310/380	\$50/ton
	> 13,500 Btu/hr	Single package	10.0 EER and 3.0 COP Heating	310/380	\$50/ton
Heat Pumps, Air Cooled (Cooling Mode)	< 65,000 Btu/hr	Split system and single package (single phase)	15.0 SEER and 12.5 EER	210/240	\$50/ton
	< 65,000 Btu/hr	Split system and single package (three phase)	13.0 SEER and 11.6 EER	210/240	\$50/ton
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	Split system and single package	11.0 EER and 11.4 IPLV	210/240	\$50/ton
	≥ 135,000 Btu/hr and < 240,000 Btu/hr	Split system and single package	10.8 EER and 11.2 IPLV	340/360	\$50/ton
	≥ 240,000 Btu/hr	Split system and single package	10.0 EER and 10.4 IPLV	340/360	\$50/ton
Heat Pumps, Air Cooled (Heating Mode)	< 65,000 Btu/hr	Split system (single phase)	8.5 HSPF	210/240	See note 2
	< 65,000 Btu/hr	Single package (single phase)	8.0 HSPF	210/240	See note 2
	< 65,000 Btu/hr	Split system (three phase)	8.0 HSPF	210/240	See note 2
	< 65,000 Btu/hr	Single package (three phase)	7.5 HSPF	210/240	See note 2
	≥ 65,000 Btu/hr and < 135,000 Btu/hr	47°F db /43°F wb outdoor air	3.4 COP	340/360	See note 2
		17°F db /15°F wb outdoor air	2.4 COP	340/360	See note 2
	≥ 135,000 Btu/hr	47°F db /43°F wb outdoor air	3.3 COP	340/360	See note 2
		17°F db /15°F wb outdoor air	2.2 COP	340/360	See note 2
Heat Pumps, Water Source (Cooling Mode)	< 135,000 Btu/hr	85°F entering water	14.0 EER	320	\$50/ton
Heat Pumps, Water Source (Heating Mode)	< 135,000 Btu/hr	70°F entering water	4.6 COP	320	See note 2
Evaporative Cooling	All	Direct or indirect	Industry Standard Rating (ISR)		\$0.02/ISR CFM
Chillers	All except chillers intended for backup service only	Serving primarily occupant comfort cooling loads (no more than 20% for process cooling loads)	Must exceed minimum efficiencies required by energy code		See note 3
Variable-Frequency Drive HVAC fans and pumps	≤ 100 horsepower	HVAC fans and pumps			\$65/horsepower
Occupancy Based PTHP/PTAC Control	All sizes with no prior occupancy based control		See note 5		\$50/controller
Electronically Commutated Motor	≤ 1 horsepower	Refrigeration application			\$0.50/watt
		HVAC application			\$50/horsepower
Solid Door Refrigerator	≤ 30 cubic feet volume (V)		Maximum kwh/day = 0.06*V+1.22		\$50/unit
	31– 60 cubic feet		Maximum kwh/day = 0.06*V+1.22		\$70/unit
	≥ 61 cubic feet		Maximum kwh/day = 0.06*V+1.22		\$90/unit
Solid Door Freezer	≤ 30 cubic feet volume (V)		Maximum kwh/day = 0.28*V+0.97		\$150/unit
	31– 60 cubic feet		Maximum kwh/day = 0.28*V+0.97		\$175/unit
	≥ 61 cubic feet		Maximum kwh/day = 0.28*V+0.97		\$200/unit

Notes for mechanical and other energy efficiency measures incentives table:

- Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive.
- Incentives for heat pumps are \$50 per ton of cooling capacity ONLY. No incentives are paid per ton of heating capacity. Heat pumps must meet both the cooling mode and heating mode efficiency requirements to qualify for per-ton cooling efficiency incentives.
- \$0.12/kwh annual energy savings + \$50/kw. Chiller energy and demand savings subject to approval by Pacific Power. Chiller incentive application pre-approval is recommended but not required.
- Throttling or bypass devices, such as inlet vanes, bypass dampers, three-way valves, or throttling valves must be removed or permanently disabled to qualify for HVAC fan and pump VFD incentives. VFDs required by energy code are not eligible for incentives. California energy code requires a VFD on new HVAC fans of greater than 10 horsepower and new HVAC pumps with motors larger than 5 horsepower.
- Controller units must include an occupancy sensor and include the capability to setback the zone temperature during extended unoccupied periods and setup the temperature once the zone is occupied.
- Incentives are available via a post-purchase application process.

SEER = Seasonal Energy Efficiency Ratio
 EER = Energy Efficiency Ratio
 COP = Coefficient of Performance
 HSPF = Heating Seasonal Performance Factor
 IPLV = Integrated Part Load Value
 PTHP = Packaged Terminal Heat Pump
 PTAC = Packaged Terminal Air Conditioner
 HVAC = Heating, Ventilating and Air Conditioning
 VFD = Variable-Frequency Drive
 ARI = Air-Conditioning and Refrigeration Institute

New construction and major renovation Incentives for other energy efficiency measures

Equipment Type	Size Category	Minimum Efficiency Requirement	Customer Incentive
Cool Roof	Roofing over spaces with mechanical cooling	Must comply with ENERGY STAR [®] reflective roof products requirements	\$0.10/square foot
Plug Load Occupancy Sensor			\$15/qualifying unit
Beverage or refrigerated display occupancy sensor	No occupancy sensor control	See note 2	\$75/sensor

Notes for other energy efficiency measures incentives table:

1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive.
2. Intended for refrigerated vending machines and display cases containing only non-perishable bottled and canned beverages. Refurbished equipment that includes occupancy control is eligible.
3. Incentives are available via a post-purchase application

Residential appliances purchased for use in a business

Equipment Type	Size Category	Minimum Efficiency Requirement	Customer Incentive
Clothes Washer		Tier 1 - Modified Energy Factor (MEF) 1.72 - 1.99	\$50
Dishwashers		Energy Star qualified with an Energy Factor (EF) \geq 0.68	\$20
Refrigerators		Energy Star qualified	\$20
Electric Water Heaters	40+ gallon tank	Energy Factor (EF) \geq 0.93	\$40

Notes for residential appliances new construction and major renovation incentives table:

1. Equipment that meets or exceeds the efficiency requirements listed for the size category in the above table may qualify for an incentive. **MEF** = Modified Energy Factor
EF = Energy Factor
2. Incentives are available via a post-purchase application

Surprising

as it may sound, we'd like to help you use less energy.



Energy
FinAnswer[®]
California

“We, like everyone else in business, are always looking to produce more product with less cost. Our projects with Pacific Power provide tremendous results: process improvement, reduced energy consumption and a reduction in operating costs. ”

Brad Beavers
Regional Process Control Specialist
Timber Products Company

Energy FinAnswer[®] from Pacific Power

We have the incentives and expertise to help you reduce your energy consumption.

Using less energy will save you money, but that's just one of the benefits of taking advantage of Pacific Power's Energy FinAnswer program. You can also see equipment reliability improve and get better production capacity and quality. It can help you enhance your employees' comfort, productivity and efficiency as well.

Good news for your bottom line. And it's good for all of us and the environment. Participating in energy efficiency programs helps shrink our carbon footprint and is one of the lowest cost resources to meet future energy needs.

Retrofits

If you're a Pacific Power commercial, industrial or agricultural customer in California,* we offer energy engineering expertise and **cash incentives** to help you upgrade to the most energy-efficient systems available.

What qualifies?

- planned installation of proven technologies that increase electric energy efficiency

We may verify pre-installation conditions, and energy efficiency measures must meet minimum equipment efficiency levels and equipment eligibility requirements in our FinAnswer[®] Express program. (See the brochure for details.)

And what does not qualify?

- some projects already in progress
- projects involving fuel switching

How much are the retrofit incentives?

Incentive	\$0.12/kilowatt-hour (kwh) annual energy savings + \$50/kilowatt (kw) average monthly demand savings
Incentive caps	
Percent of project cost cap	50% of energy efficiency project cost
Simple payback cap	1 year (If incentive brings the simple payback below one year, the incentive is reduced so the simple payback equals one year.)
Additional requirements	
Lighting energy savings limit	Lighting kwh savings limited to 50% of project savings (If lighting kwh savings exceeds the limit, lighting measures are adjusted for purposes of calculating the incentive.)

What are the technical services for retrofits?

Energy analysis – services help identify energy efficiency opportunities and quantify savings and costs. We'll provide, at no direct cost to you, a vendor-neutral and investment-grade analysis to support your decision-making and funding approval process. Services also include a post-installation calculation of annual savings for the project as installed and operating.

Steps for retrofits

Scoping

We sign a letter of intent with you. Then, working with you, we identify potential energy efficiency opportunities. We go over the preliminary numbers with you and discuss your implementation plans and schedule.

Energy analysis

We provide an energy analysis report for the opportunities with the highest likelihood of implementation. The report contains specific recommendations and refined estimates of costs and savings. It also includes our incentive offer and any commissioning requirements. We pay for the study.

Incentive agreement

We sign an incentive agreement with you **before** you sign purchase orders or make other financial commitments to proceed with implementation. The incentive is estimated based on the energy analysis.

Implementation

You complete contracting and installation, then notify us when each is done. You complete any required commissioning and provide commissioning submittals and documentation of your final costs for each energy efficiency measure, with labor and material itemized.

Post-installation inspection and incentive payment

We provide you with a post-installation inspection report that documents the final project costs and energy savings. We calculate the incentive amount based on the inspection results and provide you with the incentive check.

*Commercial facilities must be at least 20,000 square feet (per electric meter).

New construction/major renovation

If you're a Pacific Power commercial, industrial or agricultural customer in California, we offer energy engineering expertise and **cash incentives** to help you upgrade to the most energy-efficient systems available.

What qualifies?

Planned installation of proven technologies that:

- increase electric energy efficiency
- exceed code requirements or industry standards

And what does not qualify?

- some projects already in progress
- projects involving fuel switching

How much are the new construction incentives?

Project type	Energy code applies and whole building at least 10% better than code	Energy code does not apply or whole building not 10% better than code																
Incentive	<table border="1"> <caption>Incentive per kWh/yr vs Percent better than Title 24 for whole building</caption> <thead> <tr> <th>Percent better than Title 24</th> <th>Incentive per kWh/yr</th> </tr> </thead> <tbody> <tr><td>10%</td><td>\$0.12</td></tr> <tr><td>15%</td><td>\$0.135</td></tr> <tr><td>20%</td><td>\$0.15</td></tr> <tr><td>25%</td><td>\$0.165</td></tr> <tr><td>30%</td><td>\$0.18</td></tr> <tr><td>35%</td><td>\$0.18</td></tr> <tr><td>40%</td><td>\$0.18</td></tr> </tbody> </table>	Percent better than Title 24	Incentive per kWh/yr	10%	\$0.12	15%	\$0.135	20%	\$0.15	25%	\$0.165	30%	\$0.18	35%	\$0.18	40%	\$0.18	\$0.12/kwh annual energy savings + \$50/kw average monthly demand savings
Percent better than Title 24	Incentive per kWh/yr																	
10%	\$0.12																	
15%	\$0.135																	
20%	\$0.15																	
25%	\$0.165																	
30%	\$0.18																	
35%	\$0.18																	
40%	\$0.18																	
Incentive caps																		
Percent of project cost cap	None	50% of energy efficiency project cost																
Simple payback cap	None	1 year (if incentive brings the simple payback below one year, the incentive is reduced so the simple payback equals one year)																
Additional requirements																		
Energy savings threshold	Must exceed code by at least 10% (whole building electric basis)	Qualifying equipment must exceed code, if it applies.																
Lighting energy savings limit	Lighting kwh savings limited to 75% of project savings	Lighting kwh savings limited to 50% of project savings																

If lighting kwh savings exceeds the limit, lighting measures are adjusted for purposes of calculating the incentive.

What are the technical services?

We'll provide, at no direct cost to you, the energy analysis and a post-installation calculation of annual savings for the project as installed and operating. The services vary by project type and scope.

Energy code applies (whole building approach)	Energy code does not apply or building will not exceed code by 10% (system/measure approach)
<p>Design assistance – services help your design team incorporate energy efficiency measures into the construction documents.</p> <p>Goal – whole building at least 10% better than energy code.</p> <p><i>Note: Design team incentives may be available.</i></p>	<p>Energy analysis – services identify energy efficiency opportunities and quantify savings and costs. The analysis is vendor-neutral and investment-grade, so you'll have information to guide your implementation decision and funding approval process.</p>

Steps for new construction/major renovation

Please contact us as early in your planning as possible to get started.

Design assistance
For projects where energy code applies (whole building approach)

Energy analysis
For projects where energy code does not apply or where building will not exceed code by at least 10% (system/measure approach)

Scoping

We sign a letter of intent with you. Then, working with you, we identify potential energy efficiency opportunities. We go over the preliminary numbers with you and discuss your implementation plans and schedule.

Energy analysis

We provide an energy analysis report for the opportunities with the highest likelihood of implementation. The report contains specific recommendations and refined estimates of incremental costs and savings compared to a building that meets code. It also includes our incentive offer and any commissioning requirements. We pay for the study.

Energy analysis

We provide an energy analysis report for the opportunities with the highest likelihood of implementation. The report contains specific recommendations and refined estimates of incremental costs and savings compared to code-compliant or common-practice systems. It also includes our incentive offer and any commissioning requirements. We pay for the study.

Incentive agreement

We sign an incentive agreement with you **before** you sign purchase orders or make other financial commitments to proceed with implementation. The incentive is estimated based on the energy analysis.

Construction document review

We review the construction documents to confirm the proposed measures are included.

Implementation

You complete contracting and installation, then notify us when each is done. You complete the required commissioning tasks and provide documentation of installed equipment, proper operation and copies of required invoices.

Post-installation inspection and incentive payment

We complete a post-installation inspection report that documents the energy savings and incremental costs of the as-built project. We calculate the incentive amount based on the inspection results and provide you with the incentive check.

Here are some definitions used in the program

Retrofit	Changes, modifications or additions to systems or equipment in existing facility square footage.
Major renovation	Any change in facility use type or where the existing system will not meet owner/customer projected requirements within existing facility square footage.
New construction	A newly constructed facility or newly constructed square footage added to an existing facility.

More about incentives and services

We provide an incentive estimate based on the energy analysis results completed prior to installation of energy efficiency upgrades. The incentive you are paid is based on the results of a post-installation inspection.

We provide commissioning requirements for more complex measures. You'll need to meet these requirements to receive the maximum incentive and energy savings.

We contract for and pay for the energy study and the post-installation inspection. You contract for and pay for commissioning as part of the project implementation.

Remember, a Pacific Power Incentive Agreement must be signed before signing contracts with suppliers or contractors.

Here is an example retrofit incentive calculation

Compressed air energy efficiency retrofit project: Savings is 300,000 kwh/yr and 40 kw/month (\$14,100/yr); cost of compressed air upgrades is \$60,000

Step 1 Adjust any lighting measures if lighting savings exceeds 50% of total savings

Step 2 Calculate incentive

(a) Incentive based on savings

Energy incentive = $\$0.12/\text{kwh} \times 300,000 \text{ kwh} = \$36,000$

Demand incentive = $\$50/\text{kw} \times 40 \text{ kw} = \$2,000$

Energy and demand incentive = $\$38,000$

(b) Incentive based on 50% of energy efficiency project cost = $0.5 \times \$60,000 = \$30,000$

Lesser of (a) and (b) is \$30,000

Step 3 Check simple payback for whole project, determine incentive

Payback including incentive = $(\text{cost of upgrades} - \text{incentive})/\text{annual electric}$

cost savings = $(\$60,000 - 30,000)/\$14,100 = 2.1 \text{ years}$

Payback including incentive is greater than one year, so incentive is \$30,000

Wondering when you get paid?

For projects with an executed incentive agreement, the incentive is paid within 45 days after completion of the post-installation inspection report.

You're in charge

Remember, once you make a commitment, you remain in control. You choose the technologies and the manufacturers you want to use. You choose the contractors with whom you'll be working. From analysis through installation, we will work within your planning and construction schedules. Think of us as an extension of your own team – there to offer information, confirmation and options for your decision making.

Do the bright thing

■ Call our energy services hotline at **1-800-222-4335**.

■ Contact your account manager.

■ E-mail us at energy.expert@pacificcorp.com.

■ Visit www.pacificpower.net/casave.

For a copy of the approved tariff, visit the California information at www.pacificpower.net/regulation and go to Schedule A-125.

We offer incentives for lighting, premium efficiency motors, HVAC/mechanical and other upgrades under a separate program, FinAnswer Express. Contact us or visit our Web site for more details.

Energy efficiency measures receiving an incentive from us are not eligible for incentives under other Pacific Power programs.

Energy FinAnswer® – California

Frequently Asked Questions:

What is Energy FinAnswer? Energy FinAnswer is an innovative energy efficiency program. In California you can receive incentives for electric energy efficiency upgrades in new and existing facilities. The program also provides technical expertise to identify energy efficiency opportunities and quantify savings and costs.

How can I benefit? You can get a more reliable, productive and energy-efficient facility with lower operating costs. Additional benefits can include improved equipment reliability, reduced operating and maintenance expenses, improved comfort, improved worker productivity, increased production capability, improved product quality and the opportunity to be recognized as a company that is protecting the environment.

How do I enroll in Energy FinAnswer? Contact your account manager, call our energy services hotline at 1-800-222-4335, or e-mail energy.expert@pacificcorp.com to discuss your plans and request a letter of intent.

Who makes the decisions regarding design and implementation? You do. Our goal is to give you information to weigh your options, both technical and financial. We don't try to make decisions for you. The energy analysis process is sometimes complex, depending on the technology considered. So it requires the collaboration and expertise of many people. Your only obligation is to ensure that the project complies with Pacific Power's guidelines.

What is an energy analysis? An energy analysis is a comprehensive energy study, paid for by Pacific Power, that includes recommendations for energy efficiency improvements and provides a projection of the expected energy savings and project costs.

Who decides on the scope of work and selects and pays the engineering consultant? We jointly develop the scope of work and discuss selection of engineering consultants. Pacific Power contracts with the engineering consultant to perform energy analysis work and pays for the study.

What if I already have an energy analysis? If you already have an energy analysis, it is subject to Pacific Power review and approval. Pacific Power will not reimburse you for the cost of the study.

What costs are eligible? Eligible measure costs include all actual expenses reasonably incurred by the eligible customer directly related to the construction, installation or implementation of an eligible measure. Costs may include equipment costs, customer-paid engineering, design and commissioning fees, materials, supplies and installation costs. If the customer installs measures, the customer can submit documentation of actual cost of labor incurred. For new construction or expansion of existing facilities, eligible measures costs are those that are additional to achieve energy efficiency levels that exceed code or industry standard practice. Measure costs are subject to Pacific Power approval.

How is the incentive determined? Initially, the incentive is estimated based on energy and demand savings and measure cost estimates from the energy study. The final incentive paid is based on the same formula using energy and demand savings and measure cost results from the post-installation inspection report.

For new construction / major renovation projects in the Design Assistance program track, how is the owner / customer incentive calculated?

- **Step 1** – determine the incentive rate using sliding scale

The incentive rate varies depending on the percentage by which the energy efficiency project exceeds current California energy code (whole building electric basis). The date of the building permit application establishes the current version of the code. The percentage is subject to approval by Pacific Power.

- If the percentage is between 10% and 30%, use the formula below to calculate the incentive rate(s):

$$\text{Incentive rate (in \$ per kWh/yr)} = (\text{percentage} \times 30 = 9) / 10$$

Note – percentage is expressed as a decimal (e.g. for 20%, enter 0.2 in the formula)

- If the percentage is:

- $\geq 30\%$, the incentive rate is \$0.18 per kWh/yr
- $< 10\%$, the project is ineligible for an incentive under the Design Assistance program track.

(over)

- **Step 2** – determine the energy efficiency incentive amount

To determine the energy efficiency incentive amount, multiply the annual kWh savings by the incentive rate.

What is an appropriate baseline for energy consumption and measure costs? The baseline is the equipment inventory and operation prior to implementing energy efficiency improvements. Energy savings and energy efficiency measure costs are calculated from the baseline:

- If the project is an elective retrofit, the baseline is existing equipment and operation.
- If the project is new construction/major renovation, replacement of equipment at the end of its useful life, or an expansion, the baseline is assumed to be the energy consumption and implementation cost for a facility/system that meets any required code or is common practice for the industry.

Who owns the equipment? The facility owner owns the equipment from the outset.

Who installs, operates and services the equipment? You and your contractors retain responsibility for the installation, operation and service of equipment. You also make repairs or adjustments as needed to bring the equipment up to its designed energy efficiency level.

What about confidentiality? Pacific Power's consultants are under strict confidentiality agreements.

When do I get the incentive payment? For projects with an executed incentive agreement, the incentive is paid within 45 days after the energy efficiency measure installation is complete. To be complete:

- The energy savings capability of the project installation needs to be operational.
- Any required commissioning needs to be complete.
- Pacific Power needs to inspect the installation and approve measure cost documentation.

Who gets the incentive payment? The Pacific Power customer who signed the incentive agreement and completed the energy efficiency improvements receives the incentive payment. The customer can be the site owner or a facility tenant. The customer can designate someone else to receive the incentive payment.

What if lighting energy savings exceeds the limit? The lighting measures can be covered under the FinAnswer® Express incentive program. Or, you can remain on Energy FinAnswer and either incorporate additional non-lighting measures or receive an incentive that is based on the lighting energy savings limit.

What if I do not have a FinAnswer energy study and the project has started? Contact your account manager or call toll free at 1-800-222-4335 to discuss the current status of the project. If purchase orders for the equipment related to efficiency improvements have already been issued, we cannot offer incentives. With purchase orders signed, it is too late to influence the project. Let us know about your future project plans.

What if I have a FinAnswer energy study and have started the project? Contact your account manager or 1-800-222-4335 to discuss the current status of the project. You need to sign a Pacific Power Energy Efficiency Incentive Agreement prior to ordering equipment.

When does my project have to be installed to be eligible for incentives? Your incentive agreement will include a required completion date.

For more information on Energy FinAnswer

Call our energy services hotline: 1-800-222-4335

E-mail: energy.expert@pacificcorp.com

Visit our Web site: www.pacificpower.net/casave