PacifiCorp's Planned Changes to FinAnswer Express in California
November 2011

PacifiCorp is planning to make modifications to the FinAnswer Express business customer energy efficiency program, which is offered through Schedule A-115. The changes are intended to a) make updates needed to align with changes in markets, codes, standards, and third party specifications, b) increase overall participation and energy savings achieved through the program and c) improve administration of the program. Consistent with the change process for the FinAnswer Express program documented in Application No. 07-07-011[1], notice of the changes will be posted on the program website[2] 45 days prior to implementation.

Background

The FinAnswer Express program is available to commercial, industrial and agricultural customers in PacifiCorp's California service territory and offers incentives for prescriptive measures which improve energy efficiency. The program also includes incentives for custom measures not listed in the program incentive tables. The current program offers incentives for lighting, motors, heating ventilation and air conditioning ("HVAC"), building envelope, food service, appliances, compressed air, dairy/farm, irrigation, and other measures. Incentives are available for both retrofit projects and new construction/major renovation projects. The FinAnswer Express program was first approved by the California Public Utilities Commission in 2008.[3]

PacifiCorp retained Nexant, Inc. through a competitive bidding process to review the FinAnswer Express program and to provide recommendations for program improvement[4]. The primary objective of Nexant's study was to increase the level of energy savings achieved through and to increase the comprehensiveness of the FinAnswer Express program. Several of the program modifications described herein have been informed by the Nexant study. The report prepared by Nexant for the FinAnswer Express program is provided as Exhibit 1[5].

Description of Planned FinAnswer Express Changes

The FinAnswer Express program modifications are consistent with the white paper entitled *Long-term energy efficiency strategic plan for PacifiCorp's service territory in California*, which was provided to the Energy Division and the Division of Ratepayer Advocates on February 27, 2009, and is attached herewith as Exhibit 2. Sections of the strategic plan which relate to the FinAnswer Express program changes described herein are shown in blue text.

[1] Originally submitted with the Commission on July 16, 2007; refer to Exhibit G.
[2] http://www.pacificpower.net/wattsmart
[3] See Decision No. 08-01-041 of the California Public Utilities Commission dated January 31, 2008.
[4] Nexant was also retained to review the Energy FinAnswer program (Schedule A-125).
[5] The projections in the report are intended to capture the relative magnitude of changes resulting from the program changes for a typical year. Results in any given reporting period will be affected by customer access to capital, customer-specific business outlook, and other factors.

The program modifications are summarized below with complete details provided in the revised FinAnswer Express incentive tables, which are provided in Exhibit 3.[6]

Lighting

The planned changes for lighting include maintaining the existing structure of the program, while incorporating the program and measure level recommendations highlighted below.

Programmatic Changes for Lighting

- *To improve measure adoption, decouple eligibility for incentives from the existing fixture for retrofit projects and provide incentives based only on the fixture installed.* With the vast amount of the fixture retrofit combinations and increasing project volume, a growing number of retrofits fail to meet the listed existing fixture criteria necessary to qualify for prescriptive incentives. Providing incentives based on the fixture installed, regardless of the existing fixture, allows incentives to be more easily specified and expands the capabilities of the program to deal with a broader array of existing and proposed fixture types. Establish incentives commensurate with the current program for similar fixtures at an incentive rate based on average energy savings per fixture type from historical program data. Continue to report actual energy savings and measure costs for retrofit projects using an updated version of the current retrofit lighting tool. Projects will be required to save energy relative to a baseline lighting system to qualify for prescriptive per fixture incentives.

- *In retrofit situations, improve measure adoption by simplifying the program eligibility requirements and incentive offering to pay incentives for many measures on a per lamp basis.* For instance, incentives for Fluorescent T8's would be paid based on the number of lamps, where a fixed incentive would be multiplied per the number of lamps in the fixture. This simplifies the incentive table considerably and limits the number of incentives classified as "Custom", allows the incentive to scale with the increased fixture cost and energy savings associated with larger numbers of lamps, does not limit incentives to certain pre-existing lighting configurations, and provides greater flexibility for specifying energy-saving lighting configurations that qualify for prescriptive incentives.

- *Modify the percent of project cost incentive cap for lighting retrofits from 60% to 70%.* This adjustment mirrors the planned adjustment to the Energy FinAnswer project cost caps and will help improve customer economics and increase program savings.

[6] Exhibit 3 contains the FinAnswer Express program incentive tables and definitions, which were provided as part of Exhibit G in Application No. 07-07-011. This document was revised in late 2009 to reflect program changes that went into effect January 1, 2010. In Exhibit 3, the incentive tables are marked to show the planned changes to the current program. For reference, the current program and incentive tables can be found on the program website at http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/CA_FinAnswer_Express_Retrofit_Incentives_Brochure.pdf, and http://www.pacificpower.net/content/dam/pacific_power/doc/Business/Save_Energy_Money/CA_FinAnswer_Express_New_Construction_Incentives_Brochure.pdf.

- *Modify the New Construction/Major Renovation incentive to reflect a 'Pay for Savings' approach, relative to an appropriate baseline (usually defined by state energy code).* This will allow for increased flexibility, promote more creative lighting design, and reduce the adoption challenges of new technologies as they become market ready.

Measure Specific Recommendations for Lighting

- *Modify the eligibility requirements for 'premium efficiency' T8 fluorescents to match the High Performance/Reduced Wattage T8 lamp and ballast qualifying requirements of Consortium for Energy Efficiency (CEE).* Both the lamp and ballast must be CEE qualified, but they do not need to meet a qualifying combination. This flexibility will allow customers to choose the most appropriate combination for the space or application.

- *Add a sunset date of July 14, 2012 for the standard T8 incentives to align with the effective date of new federal efficacy standards for General Service Fluorescent Lamps (GSFLs).* Savings attributed to replacing T12 fixtures in retrofits will continue to be based on a T12 energy efficient lamp/energy efficient magnetic ballast combination for approximately 18 months following the sunset date to reflect that most projects will continue to be elective upgrades until such time that T12 lamps and ballasts have only limited availability. Approximately January 1, 2014, the FinAnswer Express program may revise the linear fluorescent baseline utilized for replacement of T12 lamps/ballasts. The revised baseline is expected to be a standard 32W T8 lamp with a matching electronic ballast. The current linear fluorescent baseline for the program will continue to be listed on the program website.

- *Remove the incentive offering for pulse-start metal halide fixtures 150 – 500W.* This change aligns equipment eligible for incentives with the Energy Independence and Security Act of 2007 mandate for a graduated phase-out on the manufacture and import of metal halide fixtures with ballasts that do not meet minimum ballast efficiency standards (i.e. most magnetic probe start ballasts).

- *Add limited LED prescriptive measures in the following categories to the program:* Screw-In Lamps, Recessed Downlight, Outdoor Area and Roadway, Parking Garage, High and Low-bay. Define the eligibility criteria for incentives using a list of qualifying fixtures maintained by a third party (DesignLights, ENERGY STAR and Lighting Design Lab).

- *Increase the reported energy savings for lighting controls.* Energy savings estimates for occupancy controls can be confidently estimated as high as 35%.

- *Increase incentives for lighting control sensors, as well as add an additional incentive for each dimming ballast installed that is controlled by a sensor.* Since the more efficient dimming ballasts cost 5-6 times more than standard or premium ballasts, providing an incentive to cover a portion of the required ballast should encourage greater adoption of energy savings controls.

- *Add an incentive for Advanced Daylighting Controls (ADC), which include both an occupancy sensor and daylighting sensor operating as part of the same control sequence in the same space.* Integrated ADC controls (occupancy sensor and photocell combined in the same device) were launched as a pilot project by key controls manufacturers (Lutron, Leviton, WattStopper). Results indicated occupancy and daylighting sensors should not be located in the same spot and anticipated energy savings from a combined sensor were not realized. Where inclusion of both occupancy and daylighting control in a space is desirable, the customer should be eligible for a separate incentive for both sensors installed, and the combined savings value should be reported.

- *Discontinue incentives for timeclocks.* Based on industry feedback, timeclocks/sweep controls have become standard in the industry and common practice for large general illuminance retrofit projects. In addition, timeclocks are a listed option to comply with requirements for automatic shut-off controls in non-residential buildings according to Section 131(d) of Title 24-2008.

- *Allow non-general illuminance lighting projects (i.e. cabinet signs, channel letter signs) to apply via a post-purchase application process.* These projects are generally installed on a standalone basis and can utilize a deemed savings approach.

  Modify the incentive for LED Message Center Sign retrofits from a pay for savings approach to a prescriptive incentive per lamp. A per lamp offer simplifies the incentive application process. Eligibility is limited to replacement of incandescent lamps with LED lamps, and deemed savings can be calculated for lamp replacement with a high degree of certainty.

- *Add prescriptive incentives for New Construction Exterior Lighting utilizing Induction or LED technologies.* LED and induction technologies offer significant energy savings in exterior applications but have considerable cost premiums relative to industry standard lighting configurations. Exterior code requirements are site and application specific, so deemed savings should be calculated based on the efficacy improvement of LED/Induction fixtures relative to lighting configurations currently in use.

Motors

- *Increase the maximum motor size to 5,000 horsepower and modify the eligibility requirement for Green Motor Rewind to remove the retrofit only restriction.* The Green Motor Rewind measure is delivered as part of a large regional program, and increasing the maximum motor size aligns the program in California with other programs in the region. The majority of rewinds will be for existing motors in existing facilities; however, there is not a need to preclude a rewound motor from being used in a new facility.

HVAC

- *Adopt minimum efficiency IEER rating criteria for Unitary air-conditioners and heat pumps >65,000 Btu/hr* - ANSI/AHRI Standard 340/360-2007 for unitary air-conditioners and heat pumps >65,000 Btu/hr phased out IPLV ratings on December 31, 2009 in favor

of the Integrated Energy Efficiency Ratio (IEER) rating. In contrast to the IPLV rating, the IEER rating conditions are not fixed temperatures across all load conditions, but vary depending on the part load condition. Note - this phase out applies to equipment manufacturers and is a rating metric change.

- *Align minimum efficiency requirements for Unitary air-conditioners and heat pumps >65,000 Btu/hr with revised CEE High-Efficiency HVAC Specifications* - CEE is currently in the process of reviewing their specification to replace IPLV values with appropriate IEER values, with a revised specification expected by the end of 2011. Based on preliminary drafts of the specification, the plan is to align minimum efficiency requirements for unitary air conditioners and heat pumps with the revised CEE specification (Tier 1 and Tier 2) when it becomes available, and mirror any changes made by CEE to the specification over time. Minimum efficiency requirements to qualify for incentives will be published on the program website and included in program literature and updated as necessary to align with efficiency specifications by CEE.

- *Reduce incentives for Unitary HVAC and Heat Pumps by $25/ton* – Incentives will be reduced to align more closely with the incentives offered by other utility programs evaluated in the analysis attached as Exhibit 1.

- *Raise incentive level for evaporative cooling equipment* - The incentive for evaporative coolers will be increased to $0.06 per CFM. This level of approximately $78 per ton is more in line with the incentives offered by other utilities.

- *Raise minimum efficiency requirements for PTAC and PTHP equipment higher than federal minimum efficiency requirements going into effect on September 30, 2012* – Federal minimum efficiency requirements are increasing dramatically and the FinAnswer Express program will redefine eligibility criteria to be higher than required by federal regulation. Minimum eligibility requirements were defined such that approximately 25 – 50% of above-code equipment available in the marketplace would qualify for incentives and no equipment category would only have one qualifying manufacturer.

Building Envelope

- *Incentives for the Cool Roof measure will be discontinued.* Eligibility is already limited to low-slope roofs in climate zones 1 and 16, since Title 24-2008 stipulates minimum thermal emittance and 3-year aged solar reflectance values for roofing products installed on certain types of buildings. Additionally, the Sacramento Municipal Utility District has discontinued offering incentives for Cool Roofs since the last evaluation of this measure.

- *Tighten the minimum efficiency requirement for window assemblies to U≤0.30* – Market availability of U≤0.30 windows has increased dramatically, while costs have fallen, and minimum efficiency requirements will be revised accordingly.

Food Service

- *Modify incentives for Beverage or Refrigerated Display Machine Occupancy Sensor.* Incentives will be offered for purchase of entire Refrigerated Vending Machines that meet minimum efficiency requirements. Currently, ENERGY STAR maintains a specification for Refrigerated Vending Machines, and the Code of Federal Regulations includes requirements for refrigerated vending machines that go into effect August 31, 2012. Since the ENERGY STAR specifications are not as stringent as the upcoming pending federal efficiency requirements, the federal efficiency regulations will be the minimum efficiency requirements to be eligible for an incentive until the regulations become effective. On August 12, 2012, incentives will be discontinued. Eligibility for refrigerated vending machines will be limited to new machines. Rebuilt machines will not be eligible for incentives. (Note this measure has also been moved from the incentive table for other efficiency measures to the incentive table for food service equipment.)

- *Discontinue Incentives for Display Cooler Occupancy Sensor* – Eligibility is currently limited to refrigerated display cabinets containing non-perishable canned or bottled beverages where savings potential is the greatest. However, eligible cabinets are generally high-traffic, open-display areas with few opportunities for occupancy sensors to power down lighting and cooling equipment. Additionally, participation among customers has been low, perhaps because of a desire to maintain attractive retail displays with bright lighting and cool temperatures for canned or bottled beverages to attract customers.

- *Modify minimum efficiency requirements for commercial refrigerators and freezers to align with ENERGY STAR.* ENERGY STAR and CEE have aligned their specifications for refrigerators and freezers, effective January 1, 2010, to match the current ENERGY STAR Version 2.0 specification. Eligibility requirements will be updated to match the ENERGY STAR Version 2.0 requirements. The ENERGY STAR specification includes glass-door refrigerators and freezers, and chest refrigerator/freezer configurations in addition to the solid-door refrigerators and freezers currently eligible for incentives through the FinAnswer Express program, thereby expanding the number of refrigerator/freezer configurations eligible to receive incentives.

- *Add a Second High-Efficiency Tier with more stringent eligibility requirements and higher incentives for Electric Insulated Holding Cabinets, Electric Steam Cookers, Electric Griddles and Electric Commercial Fryers:* Products are available that exceed the minimum requirements established by the ENERGY STAR specification. Higher incentives should encourage customers to consider purchasing the most efficient ENERGY STAR rated commercial kitchen cooking equipment available.

Appliances

- *Discontinue incentives for ceiling fans.* Federal manufacturing standard requires all ceiling fans with lighting kits to have ENERGY STAR qualified lighting included. Also, the only savings that can be attributed to installing a high efficiency ceiling fan over a

baseline ceiling fan are the savings attributed to the high efficiency motor, which are extremely small (6 kWh/yr).

- *Move the room air conditioner measure to the HVAC incentive table.*

- *Modify the appliance recycling measures so the specific appliances are not listed and point the measure to Home Energy Savings program where the list of appliances eligible for recycling will be managed.*

Irrigation

- *Add irrigation pump VFDs as measure in FinAnswer Express with an incentive calculated based on annual energy savings.* To streamline delivery of technical analysis currently offered by PacifiCorp through the Energy FinAnswer program, the Irrigation Pump VFD measure will be adopted as a post-purchase FinAnswer Express measure with an incentive rate of $0.12/kWh annual energy savings. Program administrators will use a simplified analysis tool to compute energy savings based on either measured or assumed site-specific operating parameters, similar to BPA and Energy Trust of Oregon. Due to the wide variability of energy savings that may result from irrigation pump VFD's depending on application, pump type, and irrigation application, there will be minimum eligibility criteria established and posted on the program website for this measure in FinAnswer Express (e.g. eligible irrigation pump VFD applications, minimum savings such as a percent or kWh/yr/hp criteria).

- *Incentive table has been re-organized to align with irrigation system types and the wording has been modified for additional clarity.*

- *Modify eligibility criteria for Brass Impact Sprinklers to include other types of Impact Sprinklers* – Impact sprinklers may be constructed of materials other than brass and will qualify for incentives.

Dairy/Farm Equipment

- *Modify the minimum efficiency requirement for automatic milker takeoffs.* Revise the eligibility criteria for automatic milker take-offs to clarify that replacements of existing automatic milker take-offs are not eligible for prescriptive incentives, and that a VFD must be present on the vacuum pump and adjust pump speed relative to vacuum demand.

Compressed Air

- *Revise the maximum system size for low pressure drop filters, receiver capacity addition, refrigerated cycling dryers, and outside air intake measures.* In the current program, eligibility for post-purchase prescriptive incentives is restricted to systems with a single compressor with operating capacity less than or equal 75 hp. Based on feedback from program participants, vendors, and administrators, eligibility will be revised to include any compressed air system with a total operating capacity of 75 horsepower or less. Multiple compressor configurations are allowed, except for the VFD-controlled

compressor measure, where eligibility will continue to be limited to systems with a single operating compressor with capacity less than or equal to 75 hp. Most projects with compressor systems larger than 75 hp or with multiple compressors will continue to receive services under the Energy FinAnswer program.

- *Remove the maximum system size for zero loss condensate drains.* In the current program, eligibility for post-purchase prescriptive incentives is restricted to systems with a single compressor with operating capacity less than or equal 75 hp. Based on feedback from program participants, vendors, and administrators, eligibility will be revised to remove the maximum system size for this measure. The operating characteristics and energy savings from zero loss drains are independent of compressor size and a restriction on eligibility based on compressor size unnecessarily limits participation.

Other Energy Efficiency Measures

- *The Beverage or Refrigerated Display Machine Occupancy Sensor measure has been moved from this table to the Food Service incentive table.*

Custom Incentive

- *Modify the percent of project cost incentive cap from 60% to 70%.*

In addition to the above highlighted changes, there are other minor wording changes identified in Exhibit 3 to improve clarity.

Table 1 below provides a summary of the projections for the FinAnswer Express program reflecting the planned modifications described herein.

Table 1
Summary of FinAnswer Express Program with Planned Changes

	Projections - Modified Program			
	2012	2013	2014	2012-2014
Expenditures	$448,000	$434,344	$393,399	$1,275,743
kWh/yr Savings (gross savings at customer site)	1,410,116	1,475,272	1,198,574	4,083,962

Cost Effectiveness

The FinAnswer Express program is expected to remain cost effective with the planned changes. Provided as Exhibit 4 is the cost-effectiveness analysis for the FinAnswer Express program reflecting the program changes described herein prepared using the PG&E 10-12 4g5.xlsm version of the E3 calculator.

The FinAnswer Express program will continue to be funded through Schedule S-191, Surcharge to Fund Public Purpose Programs.

Exhibits Provided

Exhibit 1 – FinAnswer Express Market Characterization and Program Enhancements report prepared by Nexant.
Exhibit 2 – PacifiCorp long term energy efficiency strategic plan white paper – with sections applicable to changes described herein marked in blue text.
Exhibit 3 – FinAnswer Express incentive tables and definitions – with changes from the current program marked.
Exhibit 4 – Cost effectiveness analysis.