Exhibit B Product Energy Efficiency and and Installation Standards

1. Introduction

This Exhibit describes general product energy efficiency and installation standards relating to retrofit energy efficiency measures (EEMs) installed in residential dwellings. Section 2 describes the installation standards that are to be used in the process of installing EEMs. Section 3 summarizes other measure-specific standards. Section 4 specifies the IOU's polices with respect to carbon monoxide testing.

2. Installation Standards

- All measures must be new and installed. Resale measures, measures leased, rented, rebuilt or won as prizes in existing units do not qualify. When practicable, all measures should be Energy Star® rated.

3. Other Measure-Specific Requirements

3.1 Duct Sealing

Duct sealing may be installed only in homes in which air conditioning or heating is present. Duct testing is required to confirm that duct sealing is economic. Duct testing must be done in accordance with the Installation Standards for this Program as reported to the IOU at contract signing.

3.2 Infiltration Reduction

Door weatherstripping shall not be done if any of the following conditions is present: the existing weatherstripping is already consistent with installation standards; weatherstripping would create a safety hazard or physical hardship for the resident, such as use of a threshold for resident who uses wheel chairs or walkers that exceeds a half inch in height (UBC); the door has a fire rating greater than 20 minutes; the door is a metal door or a fire-rated doors that cannot be cut to accommodate a shoe; or a functional storm door is present. Moreover, if a door is on an combustion appliance enclosure, it may not be weatherstripped if the combustion appliance receives air from conditioned space (i.e. combustion air grilles present in the enclosure door or wall); or inadequate combustion air as defined in these installation standards is not provided to the appliance by existing vents.

3.3 Low-Flow Showerheads

Low-flow showerheads must have flow rates of 2.5 gpm or less, and are eligible for incentives only if original showerheads have flow rates in excess of 3.0 gpm. Only *existing* showerheads may be replaced; the *addition* of showerheads is prohibited. Low-flow

showerheads may not be installed if any of the following conditions is present: the existing showerhead(s) are required for medical reasons; the existing showerhead is cracked, or broken or missing; the shower is not mechanically functional; standard adapters will not work; or piping is in such poor condition that showerhead installation could cause plumbing problems. Low-flow showerheads and ball joints must be made of the same material as the shower arm and adapters. If the existing water pressure is 40 PSI or less a low-flow showerhead shall not be installed.

3.4 Water Heater Blankets

Water heater blankets may not be installed on any water heater if any of the following conditions are present: an existing blanket in satisfactory condition is present; external insulation is prohibited by the manufacturer and/or would invalidate the manufacturer/s warranty; internal insulation is R-16 or greater; the tank is located within 12" of a stove, range or cooktop; the water heating system utilizes a recirculating pump; the water heater tank capacity is greater than 100 gallons; the temperature and pressure (T&P) valve is not present, or is not located within 6 inches of the tank; the T&P valve is plugged or capped; a leak in the tank or water pipes is present; plastic piping is used in the cold or hot water lines to/from the tank; or there is not at least 1 inch of clearance on all sides of the tank prior to installation.

3.5 Faucet Aerators

Faucet aerators may not be installed if any of the following conditions is present: aerators 3 gpm or less are already installed; the faucet has a special fitting for attaching an appliance (e.g., a portable dishwasher); the faucet does not provide hot water; the faucet or faucet threads are found to be damaged and/or leaky; or standard aerators will not fit. Aerators must be 2.5 gpm.

3.6 Lighting Measures

Lighting measures must be installed subject to the following conditions:

- All product classifications for which there is an Energy Star® rating
  1) must be Energy Star® certified, or
- 2 a) must be Produced by a manufacturer with a least 5 Energy Star® rated CFLs, and
- b) must meet the Energy Star® requirements for average lamps life, CRI, and lumens per watt, and
- c) must be produced with essentially similar components to the manufacturer's Energy Star® products, and
- d) no comparable Energy Star® rated exact alternative is available
- The lumen output of the Energy Star® bulb and/or Energy Star® fixture

- 1) must be comparable with the lumen output of the existing incandescent or halogen product, or
- 2) if the lumen output differs, it must provide an illumination level specifically preferred by the participant.
- Specialty lamps may only be replaced by a product recommended by the manufacturer to replace such a lamp. These specialty lamps include, but are not limited to: flood lights, vanity lights and lamps specifically designed for outdoor use.
- All globes, shades, and lenses must continue to fit the fixture as designed by the manufacturer. Compact fluorescent bulb elements may not protrude from the fixture significantly more than the incandescent bulb being replaced.
- Lights in low usage areas may not be retrofitted under this program. Low usage areas include, but are not limited to: closets, garage door openers, tool sheds, refrigerators and ovens.
- Compact Fluorescent Lamps (CFL) may not be installed in areas where the simple payback would be greater than 5 years.
- Hard-wired fixtures are fixtures that are permanently affixed to wall/ceiling electrical boxes.
- Energy efficient torchiere portable lamps must replace existing halogen torchiere portable lamps that operate at more than 150 watts. The replaced lamp must be made permanently inoperable and its materials recycled in an environmentally safe manner, consistent with state and local laws.

For multi-family buildings, lighting space types are defined as follows:

- Dwelling unit lighting is lighting that is controlled by the tenant.
- Exterior area lighting is common area lighting not controlled by the tenant.
- Other common area lighting is lighting in areas subject to periodic occupancy, such as game rooms, laundry rooms, and exercise rooms.

3.7 Ceiling Insulation

Ceiling insulation shall be installed only if the pre-retrofit insulation level is less than R-12. Attic insulation may not be installed if any of the following conditions is present: the roof is leaky or shows signs of water damage from leaks; adequate venting is not present and can not be installed per installation standard attic ventilation guidelines; hazardous electrical wiring or other hazardous conditions are present; an enclosed cavity as defined in the installation standards is present; exhaust vents terminating in the attic can not be vented to the outside by reconnecting vents or addition of exterior venting under minor home repair; disconnected or damaged space heating / cooling ducts are present and can not be repaired; all required blocking/shielding can not be installed; an inspector can not gain safe physical access to all treated areas of the attic; there is less than 24” clearance between top

of floor joist and bottom of ridgebeam ; interior or gable access meeting installation standard guidelines is not present and can not be installed; non-structural obstructions are present; a substandard framed structure that will not support the weight of the insulation and installer is present. Moreover, attic insulation may not be installed if knob-and-tube (K&T) wiring is present *and* either the knob-and-tube wiring is functional but can not be certified safe by a C-10 contractor and meet all CEC 324-4 provisions, or K&T wiring is *abandoned* but has not been disconnected and/or certified as abandoned by a C-10 contractor; or **insulation over K&T wiring is prohibited by local codes (live or dead)**. The Implementer is responsible for ensuring that the installation of ceiling insulation will not result in a hardship or an inability to perform maintenance in an attic. If the Implementer fails in this responsibility, the Implementer will be held accountable for the correction.

3.8 Wall Insulation

Wall insulation may only be installed under the following conditions:

- Wall venting must comply with the local building department codes or the Uniform Building Code requirements.
- No hazardous electrical wiring is present.
- Work does not disturb asbestos or other hazardous material.
- Where local building departments do not allow insulation over knob-and-tube wiring, the live knob-and-tube wiring must be certified safe by an electrical contractor licensed in the state of CA. Some local jurisdictions require dead knob and tube wiring to be removed before insulating so that it cannot be re-energized.
- The installed insulation achieves a minimum of R-13.

3.9 Floor Insulation

Floor insulation may not be installed if any of the following conditions is present: already insulated or partially insulated; crawl space cannot be properly vented; floor is over a heated space; hazardous electrical wiring present; deteriorated or substandard subfloor present; accessibility does not meet specifications of program Policy & Procedures; hazardous insect infestation present; excessive ground moisture and no ground cover; health or safety hazard present; and any work that will disturb asbestos or other hazardous material; an inspector can not gain safe physical access to all treated areas of the crawl space; there is less than 24" clearance between bottom of floor joist and top of the ground; and non-structural obstructions are present. Moreover, floor insulation may not be installed if knob-and-tube (K&T) Wiring is present and either the knob-and-tube wiring is functional but can not be certified safe by a C-10 contractor, or K&T wiring is abandoned but has not been disconnected and/or certified as abandoned by a C-10 contractor; or insulation over K&T wiring is prohibited by local codes. The Implementer is responsible for ensuring that the installation of floor insulation will not result in a hardship or an inability to perform

maintenance in a crawl space. If the Implementer fails in this responsibility, the Implementer will be held accountable for the correction.

3.10 Timers

The IOU Agreement Representative will approve all electric water heater timers prior to project installation. The timers shall be UL Listed and be properly sized to meet water heater manufacturers voltage and wattage requirements. All timer installations must meet all local codes and NEC/CEC codes and have a six-hour battery back-up capability. Permit numbers must be included if local codes mandates.

3.11 Refrigerators

All refrigerators replaced in this Program must be operational at time of replacement and must be recycled in an environmentally safe manner outside any utility recycling program, including proper disposal of refrigerant consistent with state and local laws.

3.12 Central Air Conditioners

All air conditioning installed under this program shall be properly sized for the space they are designed to condition. It is not acceptable to install air conditioning that exceeds the capacity of the equipment being replaced without, in IOU Agreement Representative's sole determination, sufficient documentation showing that additional air conditioning is needed. All air conditioning installed under this Program must achieve energy and demand savings relative to the equipment being replaced.

3.13 Boiler and Water Controls

Implementer shall:

- Install controllers as per the manufacturers' installation instructions;
- Provide a fifteen-year warranty on parts and labor for all water heater controller installations. The fifteen year warranty shall include battery replacement if batteries are required to maintain memory control logic in the event of a power outage, and if the lifetime of batteries is less than fifteen years;
- Install controllers only in buildings without existing water heater controllers.

3.14 High Performance Windows

High performance windows may not be installed when installation will disturb asbestos or other hazardous material.

4. Carbon Monoxide Testing

Implementer must conduct post-installation carbon monoxide (CO) check will be performed when any work is done on or associated with a natural gas appliance. OPTION: Or meet

the local IOU standard on performing CO checking which the local IOU will provide to the implementer