

## DOCKETED

<b>Docket Number:</b>	15-AAER-01
<b>Project Title:</b>	Appliance Efficiency Rulemaking for Toilets, Urinals, Faucets, HVAC Air Filters, Fluorescent Dimming Ballasts, and Heat Pump Water Chilling Packages
<b>TN #:</b>	203702
<b>Document Title:</b>	Notice of Proposed Action - Proposed Amendments to Appliance Efficiency Regulations with Corrected Edits
<b>Description:</b>	N/A
<b>Filer:</b>	Patty Paul
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	2/17/2015 3:55:24 PM
<b>Docketed Date:</b>	2/17/2015

**CALIFORNIA ENERGY COMMISSION**

1516 Ninth Street  
Sacramento, California 95814

Main website: [www.energy.ca.gov](http://www.energy.ca.gov)

**NOTICE OF PROPOSED ACTION****PROPOSED AMENDMENTS TO APPLIANCE  
EFFICIENCY REGULATIONS  
California Code of Regulations, Title 20,  
Sections 1601 through 1608****CALIFORNIA ENERGY COMMISSION  
Docket Number 15-AAER-1****February 13, 2015**

The Energy Commission's Lead Commissioner for Energy Efficiency will hold a public hearing on the following date and time to receive public comment on the Express Terms:

**Tuesday, March 17, 2015**  
10 a.m. (Pacific Time)  
California Energy Commission  
1516 Ninth Street  
First Floor, Hearing Room A  
Sacramento, California  
(Wheelchair Accessible)

Audio for the **March 17, 2015**, hearing will be broadcast over the Internet. Details regarding the Energy Commission's webcast can be found at:  
[www.energy.ca.gov/webcast](http://www.energy.ca.gov/webcast).

At this hearing any person may present statements or arguments relevant to the proposed action. Interested persons may also submit written comments (see below). If possible, please provide written comments to be considered at the hearing by **March 16, 2015**. The Energy Commission appreciates receiving written comments at the earliest possible date.

**Remote Attendance**

You may participate in this meeting through WebEx, the Energy Commission's online meeting service. Presentations will appear on your computer screen, and you may listen to audio via your computer or telephone. Please be aware that the meeting may be recorded.

## **To join a meeting:**

VIA COMPUTER: Go to <https://energy.webex.com> and enter the unique meeting number: 929 612 430. When prompted, enter your name and the following meeting password: meeting@10

The “Join Conference” menu will offer you a choice of audio connections:

1. To call into the meeting: Select "I will call in" and follow the on-screen directions.
2. International Attendees: Click on the "Global call-in number" link.
3. To have WebEx call you: Enter your phone number and click "Call Me."
4. To listen over the computer: If you have a broadband connection, and a headset or a computer microphone and speakers, you may use VoIP (Internet audio) by going to the Audio menu, clicking on “Use Computer Headset,” then “Call Using Computer.”

VIA TELEPHONE ONLY (no visual presentation): Call 1-866-469-3239 (toll-free in the U.S. and Canada). When prompted, enter the unique meeting number: 929 612 430. International callers may select their number from <https://energy.webex.com/energy/globalcallin.php>

VIA MOBILE ACCESS: Access to WebEx meetings is now available from your mobile device. To download an app, go to [www.webex.com/overview/mobile-meetings.html](http://www.webex.com/overview/mobile-meetings.html).

If you have difficulty joining the meeting, please call the WebEx Technical Support number at 1-866-229-3239.

## **PROPOSED ADOPTION DATE**

The Energy Commission will hold a public hearing for consideration and possible adoption of the 45-Day Language on the following date and time unless the Energy Commission decides to modify the Express Terms through issuance of 15-Day Language.

Date: April 8, 2015  
10 a.m. (Pacific Time)  
California Energy Commission  
1516 Ninth Street  
First Floor, Hearing Room A  
Sacramento, California  
(Wheelchair accessible)

Audio for the April 8, 2015, adoption hearing will be broadcast over the internet.

If you have a disability and require assistance to participate in these hearings, please contact Lou Quiroz at (916) 654-5146 at least 5 days in advance.

At this hearing, any person may present oral or written statements or arguments relevant to the proposed action. Interested persons may also submit written comments.

Please provide written comments to be considered at the Proposed Adoption hearing by **March 30, 2015**. The Energy Commission appreciates receiving written comments at the earliest possible date.

**PUBLIC COMMENT PERIOD/WRITTEN COMMENTS (Gov. Code, § 11346.5, subd. (a)(15))**

The public comment period for this Notice of Proposed Action will be from February 13, 2015, through and including March 30, 2015. Any interested person may submit written comments on the proposed amendments. Written comments will be accepted and considered for the Energy Commission adoption hearing if they are received by 5 p.m. on March 30, 2015. The Energy Commission appreciates receiving written comments at the earliest possible date. Written comments shall be e-mailed to [Docket@energy.state.ca.gov](mailto:Docket@energy.state.ca.gov) or mailed or delivered to the following address:

California Energy Commission  
Docket No. 15-AAER-1  
Docket Unit  
1516 Ninth Street, Mail Station 4  
Sacramento, California 95814-5504

All written comments must indicate Docket No. 15-AAER-1. When comments are e-mailed on behalf of an organization, the comments should be a scanned copy of the original on the organization's letterhead and include a signature of an authorized representative. Please copy [Harinder.Singh@energy.ca.gov](mailto:Harinder.Singh@energy.ca.gov).

**Remote Attendance**

You may participate in this meeting through WebEx, the Energy Commission's online meeting service. Presentations will appear on your computer screen, and you may listen to audio via your computer or telephone. Please be aware that the meeting may be recorded.

**To join a meeting:**

VIA COMPUTER: Go to <https://energy.webex.com> and enter the unique meeting number: 926 368 651. When prompted, enter your name and the following meeting password: mtg@10am

The "Join Conference" menu will offer you a choice of audio connections:

1. To call into the meeting: Select "I will call in" and follow the on-screen directions.
2. International Attendees: Click on the "Global call-in number" link.
3. To have WebEx call you: Enter your phone number and click "Call Me."

4. To listen over the computer: If you have a broadband connection, and a headset or a computer microphone and speakers, you may use VoIP (Internet audio) by going to the Audio menu, clicking on “Use Computer Headset,” then “Call Using Computer.”

VIA TELEPHONE ONLY (no visual presentation): Call 1-866-469-3239 (toll-free in the U.S. and Canada). When prompted, enter the unique meeting number: 926 368 651. International callers may select their number from <https://energy.webex.com/energy/globalcallin.php>

VIA MOBILE ACCESS: Access to WebEx meetings is now available from your mobile device. To download an app, go to [www.webex.com/overview/mobile-meetings.html](http://www.webex.com/overview/mobile-meetings.html).

If you have difficulty joining the meeting, please call the WebEx Technical Support number at 1-866-229-3239.

## **BACKGROUND**

The Appliance Efficiency Regulations (Title 20, Sections 1601-1608 of the California Code of Regulations (C.C.R.)) contain definitions, test procedures, labeling requirements, and efficiency standards for state-regulated appliances. Appliance manufacturers are required to certify to the California Energy Commission that their products meet all applicable state regulations pertaining to efficiency before their products can be included in the Energy Commission’s database of approved appliances and sold or offered for sale in California.

The Energy Commission is proposing to amend standards in three distinct areas: water efficiency standards for toilets, urinals, and faucets (sections 1601(h), 1602(h) and (i), 1604 (h) and (i), 1605.1(h) and (i), 1605 (h) and (i), 1606 (h) and (i)); energy efficiency standards for dimming ballasts (sections 1601(j), 1602(j), 1604(j), 1605.3(j) and (n), 1606(j)); and labeling standards for replacement air filters in heating and ventilation systems, (sections 1601(c), 1602(c), 1604(c), 1605.1(c), 1605.3(c), 1606(c), 1607(d)(12)), and heat-pump water-chilling packages (sections 1601(c), 1602(c), 1604(c), 1605.3(c), 1606(c)).

The Energy Commission has prepared this Notice of Proposed Action (NOPA) and an Initial Statement of Reasons (ISOR) as part of the supporting documents to adopt the proposed amendments. The Energy Commission has also published the Express Terms (45-Day Language) of the proposed amendment language. These documents can be obtained from the contact persons designated below or from the Energy Commission website at: [\[http://www.energy.ca.gov/appliances\]](http://www.energy.ca.gov/appliances).

## **AUTHORITY AND REFERENCE (Gov. Code, § 11346.5, subd. (a)(2) and Cal. Code Regs., tit. 1, § 14)**

The Energy Commission proposes to adopt the amendments under the authority of Public Resources Code sections 25213(a), 25218(e), 25402(c)(1), and 25402.5. The

proposed amendments implement, interpret, and make specific Public Resources Code section 25402.

### **INFORMATIVE DIGEST AND POLICY STATEMENT OVERVIEW (Gov. Code, § 11346.5, subd. (a)(3))**

Since 1975, California's building and appliance energy efficiency standards have saved Californians an estimated \$75 billion in reduced electricity bills. The state's appliance efficiency regulations saved an estimated 22,923 gigawatt hours (GWh) of electricity and 1,626 million therms (mm therms) of natural gas in 2012 alone, resulting in about \$5.24 billion in savings to California consumers in 2012 from these regulations. The proposed standards represent the next step in California's long history of resource efficiency and economic savings.

The proposed standards will provide water savings of about 460 billion gallons and monetary savings of \$1.56 billion to consumers over a ten-year period from the effective date of regulations. The proposed standards will reduce electricity consumption by about 6,371 GWh and provide consumer savings of \$863 million. Natural gas savings are estimated to be about 1,410 mm therms and would save consumers \$1.28 billion. Combined dollar savings from the proposed regulations will be more than \$3.73 billion between 2016 and 2025.

#### **I. Water Efficiency Standards: Toilets, Urinals, and Faucets**

In 2007, the California Legislature enacted Assembly Bill 715 (Laird, Chapter 499, Statutes of 2007), which set a schedule for manufacturers to meet water conservation standards for toilets and urinals sold or installed in the state such that after January 1, 2014, toilets being offered for sale or installed in the state cannot use more than 1.60 gpf and urinals cannot use more than 1.0 gpf. AB 715 required the California Building Standards Commission to incorporate these standards into the California Building Code, which it did in adopting the 2013 California Plumbing Code (§ 401.2). Energy commission staff has determined that the data supports proposing urinal flush volume levels that conserve more water than required by AB 715.

Section 25402(c)(1) of the Public Resources Code, the statutory authority for amendments to faucet standards, mandates the Energy Commission reduce the inefficient consumption of energy and water by prescribing efficiency standards and other cost-effective measures for appliances whose use requires a significant amount of energy and water on a statewide basis. Such standards must be technically feasible and attainable and must not result in any added total cost to the consumer over the designed life of the appliance.

#### **II. Energy Efficiency Standards: Dimming Fluorescent Ballasts**

No current state or federal efficiency standards, test procedures, or labeling requirements exist for deep-dimming fluorescent ballasts, those that dim at or greater than 50 percent of the full rated power. Due to the requirements of Title 24, section 130.1 of the California Code of Regulations, it can be anticipated that the purchase and installation of dimming fluorescent ballasts will be greatly accelerated. Effective July 1,

2014, new nonresidential, high-rise residential, and hotel/motel buildings that install dimming fluorescent ballasts, must use ballasts that are able to dim below 50 percent of full rated power.

The market expansion will put pressure on supply and price, encouraging the potential introduction of less efficient and cheaper dimming ballast solutions than are available. Therefore, it is essential to develop minimum energy-efficiency standards regarding dimming fluorescent ballasts to prevent the unnecessary waste of electricity resulting from the Title 24 requirements.

### **III. HVAC Air Filter Testing and Labeling**

Currently, there is a lack of labeling standards on replacement air filters resulting in improper filters being installed, wasted energy and premature equipment damage. Residential HVAC air filters sold in the market do not disclose pressure drop, and if they disclose particle efficiency, they do so inconsistently as air filter manufacturers and retailers have their own rating systems for air filter particle capture. Therefore, labeling of replacement filters is essential to ensure the air filter is the correct one for the installed HVAC system.

Under Title 24 of the building efficiency standards, the location of the air filter in the HVAC system must have a label to disclose the designed airflow rate of the system and the pressure drop of the air filter; therefore, consumers should be able to easily match the appropriate air filter to their system specifications if the replacement filter is labeled. These proposed regulations seek to complete the cycle ensuring a correct filter beyond the originally installed one.

### **IV. Heat-Pump Water Chilling Packages**

Heat-pump water-chilling packages are not currently regulated for energy efficiency. Because heat-pump water chilling packages are a new concept in Title 20, it is necessary to add a definition setting the parameters of the product. The new regulations would add a definition for “Heat-pump water-chilling packages” and establish a standardized test method to demonstrate its energy usage.

The testing and reporting requirements are not efficiency standards, requiring any specific level of efficiency, but a means to allow these packaged items to comply with the building code.

### **V. Incorporation of Federal Updates**

Changes in federal regulations are already effective by operation of preemption in California. (See 42 U.S.C. § 6297(a)-(c) and 10 C.F.R. § 430.33(a).) Because regulated parties must comply with them regardless of California’s regulations, these changes do not materially alter any requirement, right, responsibility, condition, prescription, or other regulatory element of any California Code of Regulations.

Some of the proposed express terms update the federal portion of the Appliance Efficiency Regulations. Because the Appliance Efficiency Regulations include the federal appliance efficiency requirements, when federal law changes, it is necessary to

update the Appliance Efficiency Regulations to correctly reflect these changes. To provide manufacturers, retailers, and consumers of appliances with a clear and comprehensive set of requirements, in a single location, the Energy Commission seeks to harmonize the California Appliance Efficiency Regulations with the federal appliance efficiency requirements.

## **ANTICIPATED BENEFITS**

For additional information, please refer to the “Benefits of the Regulation” discussed under the, “STATEMENT OF THE RESULTS OF THE STANDARDIZED REGULATORY IMPACT ASSESSMENT”.

## **CONSISTENCY AND COMPATIBILITY WITH EXISTING STATE REGULATIONS (Gov. Code, § 11346.5, subd. (a)(3)(D))**

The proposed amendments are not inconsistent or incompatible with existing state regulations. The Energy Commission has looked into whether there are any related state regulations in this area and has determined that the only other state regulations related to appliance efficiency are in Title 24, Part 6, of the California Code of Regulations. The proposed amendments are intended to harmonize with these provisions in Title 24, Part 6, and are therefore neither inconsistent nor incompatible with existing state regulations.

## **DOCUMENTS INCORPORATED BY REFERENCE (Cal. Code Regs., tit. 1, § 20(c)(3))**

The following represent documents incorporated by reference:

10 C.F.R. section 430.23(cc): Appendix AA to Subpart B of part 430

10 C.F.R. section 430.23(q): Appendix Q1 to Subpart B of part 430 with modifications

10 C.F.R. section 430.23(t): Appendix T to Subpart B of part 430

10 C.F.R section 431.323: Materials incorporated by reference

10 C.F.R. section 431.324: Uniform test method for the measurement of energy efficiency and standby mode energy consumption of metal halide lamp ballasts

AHRI 680-2009: Standard for Performance Rating of Residential Air Filter Equipment (Revised 2009)

ANSI/AHRI 550-590 (I-P) 2011: Standard for Performance Rating of Water-Chilling and Heat Pump Water-Heating Packages Using the Vapor Compression Cycle (Revised 2011)

ASHRAE 52.2-2012: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size (Revised 2012)

MaP Testing Toilet Fixture Performance Testing Protocol Version 5 (March 2013)

ASME/ANSI Standard A112.18.1M – 1996, 7.4.4(a): Plumbing Fixture Fittings (Revised 1996)

ASTM Standard E 1084-86: Standard Test Method for Solar Transmittance (Terrestrial) of Sheet Materials Using Sunlight (Reapproved 2009)

NFPA 70: National Electric Code (Current Edition 2014)

UL 1029: High-Intensity-Discharge Lamp Ballasts (Revised 2001)

The documents listed above are too cumbersome or impractical to publish in Title 20. Therefore, it is proposed to incorporate the documents by reference. Copies of these

documents are available for review Monday through Friday from (8:00) a.m. to (4:30) p.m. at the California Energy Commission located at:

Docket Office  
California Energy Commission,  
1516 Ninth Street, MS 4  
Sacramento, CA 95814-5504  
Phone: (916) 654-5076

**FEDERAL LAW (Gov. Code, §§ 11346.2, subd. (c) and 11346.9)**

None of the proposed changes conflict with federal law but, instead, ensure consistency with it.

**LOCAL MANDATE (Gov. Code, § 11346.5, subd. (a)(5))**

The proposed amendments will not impose a mandate on state or local agencies or school districts.

**ECONOMIC IMPACTS (Gov. Code, § 11346.5, subd. (a)(6))**

The proposed standards are designed such that appliances sold in California will use less energy or water and consumers will see a positive net present value from the purchase. The standards also strive to minimize any negative effect to efficacy of the appliances. The proposed standards will reduce electricity, natural gas, and water consumption. Conservation of these resources makes them available for other purposes. Regulations will transform the market towards more cost-effective and energy-efficient appliances.

The proposed standards will provide water savings of about 460 billion gallons and monetary savings of \$1.56 billion to consumers over a ten-year period from the effective date of regulations. The proposed standards will reduce electricity consumption by about 6,371 gigawatt-hours and provide consumer savings of \$863 million. Natural gas savings are estimated to be about 1,410 mm therms and would save consumers \$1.28 billion. Combined dollar savings from the proposed regulations will be more than \$3.73 billion between 2016 and 2025.

Energy Commission staff used a macroeconomic model to estimate the impacts of proposed and alternative regulations within the California economy, accounting for reallocation of water savings. Estimated job-years will increase by 279 in 2016 and by 621 by the year 2025. Total job-years over the decade are projected to increase by 5,668 under the proposed standards. Proposed standards are estimated to increase real disposable personal income by \$9 million in 2016 and \$56 million in 2025. The cumulative increase in personal income with the proposed standards is projected to be \$375 million, which is a beneficial outcome for the California economy.

The proposed regulations are also estimated to avoid 260,000 tons of carbon dioxide (CO<sub>2</sub>) in 2016 and 2.3 million tons in 2025. The value for CO<sub>2</sub> allowance savings was estimated to be \$151 million, based upon an assumed allowance value of \$12 per ton.

## **FISCAL IMPACTS (Gov. Code, § 11346.5, subd. (a)(6))**

Costs Requiring Reimbursement. As generally applicable requirements, the proposed amendments will not impose on local agencies or school districts any costs for which Government Code sections 17500-17630 require reimbursement.

Cost or Savings in Federal Funding to the State. As generally applicable requirements, the proposed amendments will not result in any costs or savings in federal funding to the state.

Cost or Savings to State Agencies. As generally applicable requirements, the proposed amendments will not result in any costs or savings to any state agency.

Other Nondiscretionary Costs or Savings Imposed Upon Local Agencies. As generally applicable requirements, the proposed amendments will not result in any other nondiscretionary costs or savings to local agencies.

## **EFFECT ON HOUSING COSTS (Gov. Code, § 11346.5, subd. (a)(12))**

There will be no significant effect on housing costs. Urinals are not found in residences, so the standards for urinals will not affect housing costs. The toilet standards are required by statute; therefore, the standards are simply harmonizing the Energy Commission regulations with current law. The flow rate required by the standards can be achieved by adjusting an existing piece of the faucet and will thus have no discernible effect on housing costs.

## **INITIAL DETERMINATION OF SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACTS DIRECTLY AFFECTING BUSINESS, INCLUDING THE ABILITY OF CALIFORNIA BUSINESSES TO COMPETE WITH BUSINESSES IN OTHER STATES (Gov. Code, §§ 11346.2, subd. (b)(6), 11346.3, subd. (a), 11346.5, subd. (a)(7) and 11346.5, subd. (a)(8))**

The Energy Commission has determined that there will be no significant statewide adverse economic, fiscal, or environmental impact directly affecting businesses, including small businesses, as a result of the proposed regulations, including the ability of California businesses to compete with businesses in other states because the information in the record shows that the cost per unit of compliant appliances is the same as the cost per unit of noncompliant appliances. The distribution of compliant products is spread fairly evenly amongst manufacturers.

The proposed regulations have advantages and disadvantages to retailers, manufacturers, and utilities in the state. The regulations would give an advantage to manufacturers who make and distribute more efficient appliances in California and a disadvantage to those that do not. Energy utilities will see a decrease in demand for electricity and natural gas relative to a baseline forecast. Because their revenues are decoupled from sales, these utilities will see a business advantage to the proposed regulations. Water utilities will neither be at an advantage nor disadvantage as the demand for water in California far exceeds the supply. The saved water will be

redirected to other uses. Therefore, the Energy Commission expects that water utilities sales will not change.

The direct benefits of the regulations for the commercial sector in California are \$1.1 billion from 2016 to 2025. This includes \$661 million in commercial water savings, \$163 million in commercial electricity savings, and \$281 million in commercial natural gas savings over the 10-year period. With no significant adverse impacts, these savings are extremely beneficial to California's commercial sector.

**STATEMENT OF THE RESULTS OF THE STANDARDIZED REGULATORY IMPACT ASSESSMENT: IMPACTS ON THE CREATION OR ELIMINATION OF JOBS WITHIN THE STATE; THE CREATION OF NEW BUSINESSES OR THE ELIMINATION OF EXISTING BUSINESSES; COMPETITIVE ADVANTAGES OR DISADVANTAGES FOR BUSINESS CURRENTLY DOING BUSINESS WITHIN THE STATE; INCREASE OR DECREASE OF INVESTMENT IN THE STATE; INCENTIVES FOR INNOVATION IN PRODUCTS, MATERIALS OR PROCESSES; BENEFITS OF THE REGULATIONS (Gov. Code, § 11346.5, subd. (a)(10))**

**CREATION OR ELIMINATION OF JOBS WITHIN CALIFORNIA**

Total job-years over the decade will increase by 5,668 under the proposed standards. Estimated job-years rise 279 in 2016 and 621 in the year 2025.

**CREATION OR ELIMINATION OF BUSINESSES WITHIN CALIFORNIA**

Staff estimates commercial businesses will save \$12.7 million on water bills in 2016, the first year of standards implementation. By the year 2025, California commercial businesses will be saving \$117 million annually on their water utility bills. In 2016 commercial businesses are estimated to save \$2.8 million and \$5.4 million on electricity and natural gas bills, respectively. By the year 2025 these figures increase to \$30.6 million and \$50.2 million. The overall impact to California businesses will be positive: reduced water and energy utility bills, and a very small reduction in overall prices throughout the economy.

**COMPETITIVE ADVANTAGES OR DISADVANTAGES FOR BUSINESS CURRENTLY DOING BUSINESS WITHIN THE STATE**

The proposed regulations have advantages and disadvantages to retailers, manufacturers, and utilities in the state. The regulations would naturally give an advantage to manufacturers of more efficient appliances in California. Energy utilities will see a decrease in demand for electricity and natural gas relative to a baseline forecast. Because they separate revenues from sales, these utilities will see a business advantage to the proposed regulations. Water utilities will not be at an advantage or a disadvantage as the demand for water in California far exceeds the supply. The saved water will be redirected to other uses. Therefore, the Energy Commission expects that water utilities sales will not change.

## **INCREASE OR DECREASE OF INVESTMENT IN THE STATE**

Staff estimates that gross private domestic fixed investment declines by \$26 million in 2016 and by \$446 million in 2025. These levels of reduced investment are very small compared to the whole California economy and represent a 0.01 percent decline in 2016 and a 0.12 percent decline by 2025. In other words, the proposed regulations reduce domestic private investment by less than two-tenths of 1 percent over the 10-year analysis period. Given important caveats regarding limitations of the REMI model to account for productive economic uses of conserved water and energy, staff finds the overall effect of the regulations to investment in California to be small compared to expected benefits of increased jobs, increased personal income, conservation of water and energy, improved air quality, and reduced greenhouse gas emissions.

## **INCENTIVES FOR INNOVATION IN PRODUCTS, MATERIALS OR PROCESSES**

Innovations in the products proposed to be regulated can be organized into three types: innovations that would decrease water or energy use, innovations that are neutral to water or energy use, and innovations that increase water or energy use. The proposed standards clearly provide incentives for technologies and innovations that can reduce the water and energy use of proposed covered products. The proposed regulations put pressure on manufacturers of existing products to adjust from status quo designs that would have difficulty meeting the performance standards. These changes lead to increased industry investment in technology that forms the core of innovation.

In the case of toilets, urinals, and faucets, the proposed regulations form an incentive for innovation, as the demand for improved performance in lower water-using products will be increased.

In the case of heat-pump, water-chilling packages, innovation is directly enhanced because the regulations are removing a market barrier for this product.

## **BENEFITS OF THE REGULATIONS**

The proposed and alternative regulations provide a wide range of benefits to California households and commercial businesses. The benefits that were quantified include water, electricity, and natural gas conservation, utility bill savings, jobs impact, changes in personal income, reduced air pollution, and reduced greenhouse gas emissions.

The proposed standards over the next 10 years will conserve about 460 billion gallons of water. Staff estimates the consumer water utility bill savings from implementation of the proposed standards to total \$0.9 billion for households over 10 years. Commercial businesses would save roughly \$661 million between 2016 and 2025.

Total electricity savings are estimated to be 136 GWh in 2016 and rises to 1,156 GWh by 2025. The value of residential electricity bill savings is estimated to be \$18.3 million in 2016 and up to \$119 million in 2025. Commercial sector electricity bill savings over the same period go from \$2.8 million to \$30.6 million.

Estimates of natural gas savings from reduced hot water heating total 30 mm therms in 2016 and increase to 252 mm therms in 2025 under the proposed standards. Cumulative natural gas savings for the 10-year period equals 1,410 mm therms.

Utility bill benefits to households total \$23.7 million in 2016 and increase to \$176 million in 2025. Total residential sector natural gas utility bill savings is \$1.0 billion between 2016 and 2025. Businesses are estimated to save \$5.4 million in 2016 and \$50.2 million by 2025. Businesses will save a total of \$281 million on natural gas bills over the 10 years.

Total job-years over the decade will increase by 5,668 under the proposed standards. Estimated job-years rise 279 in 2016 and 621 in 2025.

In addition to utility bill savings, the proposed standards will increase real disposable personal income by \$9 million in 2016 and \$56 million in 2025, as a result of employment effects. The cumulative increase in personal income with the proposed standards is \$375 million.

The proposed regulations over the next 10 years will reduce PM 2.5 emissions by about 193 tons, NOx emissions by 4,446 tons, and oxides of sulfur (SOx) emissions by about 64 tons. The proposed standards are estimated to avoid between \$1.1 million and \$2.4 million in health impacts during the first year of implementation in 2016. By 2025, the range of avoided public health impacts increases to \$8.1 million to \$20.5 million. The 10-year cumulative estimated air quality benefit of proposed regulations is between \$36 million and \$90 million.

The proposed regulations are estimated to avoid 0.26 million tons of carbon dioxide (CO<sub>2</sub>) in 2016 and 2.3 million tons in 2025. The cumulative benefit of CO<sub>2</sub> reductions for the proposed standards is 12.6 million tons. Total avoided global damages for the 10-year period under proposed standards equals \$542 million. A second value estimated is the avoided cost of purchasing CO<sub>2</sub> allowances for California's Cap-and-Trade Program. The value for CO<sub>2</sub> allowance savings was estimated to be \$151 million, based upon an assumed allowance value of \$12 per ton.

## **RESPONSE TO COMMENTS ON STANDARD REGULATORY IMPACT ASSESSMENT**

The Department of Finance (DOF) submitted comments to the Energy Commission regarding the standard regulatory impact assessment (SRIA) dated January 2, 2015. The Commission reviewed and updated the SRIA in response to DOF and to adjust for changes in the regulatory proposal.

In its comments, DOF requested a better description of the baseline, reflecting the current regulations against which the impacts of the proposed regulations are compared. In addition they requested more detail so that a "percentage improvement" could be derived. The Commission has updated its SRIA to address this comment. The Commission used more sophisticated analysis than percentage improvement from baseline code in its analysis to derive savings and impacts as outlined in the staff reports relied upon in this rulemaking. The DOF presents potential effects of increasing

the efficiency of a product, including varying product life and usage patterns. These were evaluated in the staff reports referenced in the SRIA and also in the documents relied upon in this rulemaking.

The DOF also commented that the costs and benefits should be separately and distinctly identified between different parties affected by the potential regulations. The macro-economic modeling was not detailed to a level that would allow for disaggregation as requested by DOF. For this appliance efficiency standards regulation package, the costs are very small and the majority of the individuals/businesses will both incur the small cost and reap the significant utility bills savings. In the case of a separation of purchaser and user, it is expected that the purchaser passes such costs on to the user.

The DOF noted that the Commission did not evaluate more stringent toilet and urinal standards in the SRIA. The DOF pointed out that it is the responsibility of the agency to evaluate alternatives, whether identified by external stakeholders or not. The Commission evaluated the proposed amendments as a package. As such, it evaluated a more stringent and a less stringent package relative to the proposed package. The Commission evaluated the most likely, reasonable, and substantial alternative scenarios based on staff expertise. Further, the Commission did not consider more stringent standards for toilets and urinals because it was not clear that more stringent standards would also meet the statutory requirements in 25402(c)(1) for the Commission to adopt a standard. .

Lastly, DOF commented that the SRIA should address the fiscal impacts of enforcement, implementation, and interactions with other policies. DOF provided specific examples of economic interactions with policies, including the value of air pollution and greenhouse gas emission reduction. The adoption of the proposed regulation does not include additional enforcement or implementation costs. The Commission already has certification and enforcement staff and funding that will be used to address the proposed regulations. The revised SRIA estimates the value of reduced pollution and greenhouse gasses and relevance to state policies.

The revised SRIA is available at the Energy Commission's appliance efficiency website at: <http://www.energy.ca.gov/appliances/2015-AAER-1/rulemaking/>

**COST IMPACTS ON REPRESENTATIVE PERSON OR BUSINESS (Gov. Code, § 11346.5, subd. (a)(9))**

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. Because the federal regulations are already effective by operation of preemption in California, and because regulated parties must comply with them regardless of California's regulations, these changes also do not create an adverse economic impact on representative persons or businesses.

## **BUSINESS REPORTS (Gov. Code, §§ 11346.5, subd. (a)(11) and 11346.3, subd. (d))**

The proposed changes to the labeling requirements on HVAC systems would require reporting beyond what is already required to be collected and reported to the government. The Energy Commission estimates that the annual reporting cost to be \$374 per manufacturer.

The Energy Commission finds that it is necessary for the health, safety, or welfare of the people of California that proposed section 1607(d)(12), which requires a marking on air filters manufactured after May 1, 2016, apply to businesses.

## **SMALL BUSINESS (Cal. Code Regs., tit. 1, §§ 4(a) and 4(b))**

There will be no significant cost impacts on small businesses that purchase toilets, urinals, faucets, dimming ballasts, or heating and ventilations systems subject to the proposed regulations. The costs of owning and operating toilets, urinals, faucets, dimming ballasts, or heating and ventilations systems will decrease as a result of lower electricity and water costs by using the more efficient products.

There will be no significant cost impacts on small businesses due to the federal updates because these federal regulations are already effective by operation of preemption in California, and because regulated parties must comply with them regardless of California's regulations, these changes do not create an adverse impact on small business.

## **ALTERNATIVES STATEMENTS (Gov. Code, § 11346.5, subd. (a)(13))**

Before adopting the proposed regulations, the Energy Commission must determine that no reasonable alternative it considered, or that has otherwise been identified and brought to its attention, would be more effective in carrying out the purpose for which the amendments are proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

## **DESIGNATED CONTACT PERSONS (Gov. Code, § 11346.5, subd. (a)(14))**

Please contact the following person, preferably by e-mail, for general information about the proceeding or to obtain any document relevant to the proceeding, including this document, the Express Terms, the Initial Statement of Reasons, the Form 399, and any other document in the rulemaking file:

Angelica Ramos  
California Energy Commission  
1516 Ninth Street, Mail Station 25  
Sacramento, California 95814-5512  
Telephone: 916-654-4147  
Fax: 916-654-4304  
E-mail: [Angelica.Romo@energy.ca.gov](mailto:Angelica.Romo@energy.ca.gov)

Please contact the following person, preferably by e-mail, for substantive questions:

Harinder Singh  
California Energy Commission  
1516 Ninth Street, Mail Station 25  
Sacramento, California 95814-5512  
Telephone: 916-654-4091  
Fax: 916-654-4304  
E-mail: [Harinder.Singh@energy.ca.gov](mailto:Harinder.Singh@energy.ca.gov)

The backup contact person for substantive questions is:

Kenneth Rider  
California Energy Commission  
1516 Ninth Street, Mail Station 25  
Sacramento, California 95814-5512  
Telephone: 916-654-5006  
Fax: 916-654-4304  
E-mail: [Ken.Rider@energy.ca.gov](mailto:Ken.Rider@energy.ca.gov)

Mr. Singh and Mr. Rider also can assist in obtaining documents and in answering general questions.

### **Public Adviser and Other Commission Contacts**

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission proceedings. If you want information on how to participate in this forum, please contact the Public Adviser's Office at [PublicAdviser@energy.ca.gov](mailto:PublicAdviser@energy.ca.gov) or (916) 654-4489 (toll free at (800) 822-6228).

If you have a disability and require assistance to participate, please contact Lou Quiroz at [lquiroz@energy.ca.gov](mailto:lquiroz@energy.ca.gov) or (916) 654-5146 at least five days in advance.

### **NEWS MEDIA INQUIRIES**

News media inquiries should be directed to Media and Public Communications Office at (916) 654-4989, or by e-mail at [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov).

### **AVAILABILITY OF THE TEXT OF THE PROPOSED AMENDMENTS (EXPRESS TERMS), THE INITIAL STATEMENT OF REASONS (ISOR), AND THE INFORMATION UPON WHICH THE PROPOSAL IS BASED (RULEMAKING FILE) (Gov. Code, § 11346.5, subd. (a)(16))**

The first action to take to obtain documents in this rulemaking proceeding is to visit the Energy Commission's appliance efficiency website at: <http://www.energy.ca.gov/appliances/2015-AAER-1/rulemaking/>

The website will have all of the documents prepared by the Energy Commission, including the Express Terms of the proposed amendments (written in plain English and set forth in a format that indicates both the existing text and the proposed text), the Initial Statement of Reasons, and availability of information upon which the proposed

regulations are based. The website will also include all documents incorporated by reference, as well as most of the other documents in the rulemaking file.

The Express Terms and the Initial Statement of Reasons are also available at no cost from the contact person, Angelica Ramos (see above).

The Energy Commission's Docket Office has available all of the documents in the rulemaking file; for copies, please contact:

Docket Office  
California Energy Commission  
1516 Ninth Street, MS 4  
Sacramento, California 95814-5504  
916-654-5076

**AVAILABILITY OF CHANGED OR MODIFIED TEXT (Gov. Code, § 11346.5, subd. (a)(18))**

After considering all timely and relevant comments received, the Energy Commission may adopt the proposed regulations substantially as described in this notice. If the Energy Commission makes modifications which are sufficiently related to the originally proposed text, it will make the modified text (with the changes clearly indicated) available to the public for at least 15 days before it adopts the regulations as revised. Per section 44, title 1, of the California Code of Regulations, notice of any modified text will be submitted to (1) anyone who submits oral or written comments at the public hearing, (2) anyone who submits written comments to the Energy Commission's docket, or (3) anyone who specifically requests notification of such modifications.

**FINAL STATEMENT OF REASONS (Gov. Code, § 11346.5, subd. (a)(19))**

The Energy Commission will prepare a Final Statement of Reasons on the amendments, responding to all relevant comments made during the proceeding. The Final Statement of Reasons will be available from the contact person named above, from the Docket Office, and will be posted on the Energy Commission's website.

**INTERNET ACCESS (Gov. Code, §§ 11346.4, subd. (a)(6) and 11346.5, subd. (a)(20))**

The Energy Commission maintains a website in order to facilitate public access to documents prepared and considered as part of this rulemaking proceeding. Documents prepared by the Energy Commission for this rulemaking, including this Notice of Proposed Action, the Express Terms, the Initial Statement of Reasons, and the Economic and Fiscal Impact Statements, as well as many other documents in the rulemaking file have been posted at: <http://www.energy.ca.gov/>.