State of California

California Natural Resources Agency

Memorandum

To: **Patrick Kemp**
Assistant Secretary for Administration and Finance
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Date: January 20, 2012
Telephone: (916) 654-4086

From: **California Energy Commission – Robert Oglesby, Executive Director**
1516 Ninth Street
Sacramento CA 95814-5512

Subject: **STANDARD FORM 399 FOR NONRESIDENTIAL BUILDING ENERGY USE DISCLOSURE PROGRAM RULEMAKING PROCEEDING**

Attached for your review and signature is a Department of Finance Standard Form 399, Economic and Fiscal Impact Statement. The form is being submitted in support of a rulemaking proceeding for the California Building Energy Efficiency Standards, Title 24, Part 6. This rulemaking will update existing energy efficiency standards for newly constructed buildings, and additions and alterations to existing buildings. We are submitting this form to you for the "Agency Secretary" signature (see page 4 of Std. 399), which will need to be provided to the Office of Administrative Law to initiate the public notice for the rulemaking.

If you have any questions regarding the content or the processing of this form, please contact Adrian Ownby, Project Manager, at 916-651-3008 or Maziar Shirakh, Senior Mechanical Engineer, at 916-654-3839.

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STATE OF CALIFORNIA — DEPARTMENT OF FINANCE

ECONOMIC AND FISCAL IMPACT STATEMENT

(REGULATIONS AND ORDERS)

STD. 399 (REV. 12/2008)

See SAM Section 6601 - 6616 for Instructions and Code Citations

DEPARTMENT NAME	CONTACT PERSON	TELEPHONE NUMBER
California Energy Commission	Adrian Ownby	916-651-3008
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400		NOTICE FILE NUMBER
Revisions to the California Building Energy Efficiency Standards		Z

ECONOMIC IMPACT STATEMENT

A. ESTIMATED PRIVATE SECTOR COST IMPACTS (Include calculations and assumptions in the rulemaking record.)

1. Check the appropriate box(es) below to indicate whether this regulation:

- [x] a. Impacts businesses and/or employees
- [x] b. Impacts small businesses
- [x] c. Impacts jobs or occupations
- [ ] d. Impacts California competitiveness
- [x] e. Imposes reporting requirements
- [ ] f. Imposes prescriptive instead of performance
- [x] g. Impacts individuals
- [ ] h. None of the above (Explain below. Complete the Fiscal Impact Statement as appropriate.)

h. (cont.) _____

(If any box in Items 1 a through g is checked, complete this Economic Impact Statement.)

2. Enter the total number of businesses impacted: unknown Describe the types of businesses (Include nonprofits.): all businesses will benefit

Enter the number or percentage of total businesses impacted that are small businesses: 80%

3. Enter the number of businesses that will be created: unknown eliminated: 0

Explain: _____

4. Indicate the geographic extent of impacts: [x] Statewide [ ] Local or regional (List areas.): _____

5. Enter the number of jobs created: _____ or eliminated: 0 Describe the types of jobs or occupations impacted: Companies that provide energy efficiency products and services will benefit from the increased demand for those products and services.

6. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here?

[ ] Yes [x] No If yes, explain briefly: _____

B. ESTIMATED COSTS (Include calculations and assumptions in the rulemaking record.)

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? $ 1212 million

a. Initial costs for a small business: $ 45,284 Annual ongoing costs: $ 0 Years: 15

b. Initial costs for a typical business: $ 45,284 Annual ongoing costs: $ 0 Years: 15

c. Initial costs for an individual: $ 3,289 Annual ongoing costs: $ 0 Years: 30

d. Describe other economic costs that may occur: Increased costs will result from improved windows, envelope insulation, HVAC equipment and testing, lighting, building commissioning and process load requirements.

ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)

2. If multiple industries are impacted, enter the share of total costs for each industry: Nonresidential (89%) / Residential (11%)

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. (Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.): $ _____

4. Will this regulation directly impact housing costs? ☑ Yes ☐ No If yes, enter the annual dollar cost per housing unit: $2,224 and the number of units: ~41500

5. Are there comparable Federal regulations? ☐ Yes ☑ No Explain the need for State regulation given the existence or absence of Federal regulations: Federal regulations do not apply to state, local and private construction in California.

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: $ _____

C. ESTIMATED BENEFITS (Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.)

1. Briefly summarize the benefits that may result from this regulation and who will benefit: Individuals and businesses will benefit from the reduction in energy costs. Businesses that provide energy efficiency products and services may experience an increase in business. All state and local government agencies and their tenants will benefit.

2. Are the benefits the result of : ☑ specific statutory requirements, or ☐ goals developed by the agency based on broad statutory authority?
Explain: The Commission has authority granted by statute to adopt statewide building energy efficiency standards.

3. What are the total statewide benefits from this regulation over its lifetime? $ 1,684 mil.

D. ALTERNATIVES TO THE REGULATION (Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.)

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: See attached.

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation:	Benefit: $ 1,684 million	Cost: $ 1,212 million
Alternative 1:	Benefit: $	Cost: $
Alternative 2:	Benefit: $	Cost: $

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives:
The Standards are fundamentally performance based (with the exception of some limited mandatory provisions). Owners and builders have multiple options to meet the requirements. This makes estimating costs difficult. See explanation.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? ☑ Yes ☐ No
Explain: Performance Standards are a fundamental part of the proposed Building Energy Efficiency Standards.

E. MAJOR REGULATIONS (Include calculations and assumptions in the rulemaking record.) Cal/EPA boards, offices, and departments are subject to the following additional requirements per Health and Safety Code section 57005.

ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)

1. Will the estimated costs of this regulation to California business enterprises exceed $10 million ? ☑ Yes ☐ No (If No, skip the rest of this section.)

2. Briefly describe each equally as an effective alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

   Alternative 1: n.a.

   Alternative 2: n.a.

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation:	$ 1,212 million	Cost-effectiveness ratio: $ 1.4
Alternative 1:	$ n.a.	Cost-effectiveness ratio: $ n.a.
Alternative 2:	$ n.a.	Cost-effectiveness ratio: $ n.a.

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT (Indicate appropriate boxes1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

☐ 1. Additional expenditures of approximately $ _____ in the current State Fiscal Year which are reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code. Funding for this reimbursement:

☐ a. is provided in _____, Budget Act of _____ or Chapter _____, Statutes of _____

☐ b. will be requested in the _____ (FISCAL YEAR) Governor's Budget for appropriation in Budget Act of _____

☑ 2. Additional expenditures of approximately $ 32.9 mil. in the current State Fiscal Year which are not reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code because this regulation:

☐ a. implements the Federal mandate contained in _____

☐ b. implements the court mandate set forth by the _____

court in the case of _____ vs. _____

☐ c. implements a mandate of the people of this State expressed in their approval of Proposition No. _____ at the _____ (DATE) election;

☐ d. is issued only in response to a specific request from the _____

_____, which is/are the only local entity(s) affected;

☐ e. will be fully financed from the _____ (FEES, REVENUE, ETC.) authorized by Section

_____ of the _____ Code;

☑ f. provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each such unit;

☐ g. creates, eliminates, or changes the penalty for a new crime or infraction contained in _____

☑ 3. Savings of approximately $ 40.9 million annually.

☐ 4. No additional costs or savings because this regulation makes only technical, non-substantive or clarifying changes to current law regulations.

ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)

☐ 5. No fiscal impact exists because this regulation does not affect any local entity or program.

☐ 6. Other.

B. FISCAL EFFECT ON STATE GOVERNMENT (Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

☑ 1. Additional expenditures of approximately $ 10.8 million in the current State Fiscal Year. It is anticipated that State agencies will:

☑ a. be able to absorb these additional costs within their existing budgets and resources.

☐ b. request an increase in the currently authorized budget level for the _____ fiscal year.

☑ 2. Savings of approximately $ 13.6 million (1) in the current State Fiscal Year.

☐ 3. No fiscal impact exists because this regulation does not affect any State agency or program.

☐ 4. Other.

C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS (Indicate appropriate boxes1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

☐ 1. Additional expenditures of approximately $ _____ in the current State Fiscal Year.

☐ 2. Savings of of approximately $ _____ in the current State Fiscal Year.

☐ 3. No fiscal impact exists because this regulation does not affect any federally funded State agency or program.

☑ 4. Other. The proposed regulations impact state-financed buildings but are not expected to impact federal funding of state programs.

FISCAL OFFICER SIGNATURE		DATE 1/20/12
AGENCY SECRETARY [1] APPROVAL/CONCURRENCE		DATE 1/20/12
DEPARTMENT OF FINANCE [2] APPROVAL/CONCURRENCE	PROGRAM BUDGET MANAGER	DATE 6/20/12

1. *The signature attests that the agency has completed the STD.399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or department not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

2. *Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD.399.*

(1) Net present value – not one year savings

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ECONOMIC IMPACT STATEMENT

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

2. Number of businesses impacted.

California's Building Energy Efficiency Standards (Standards) are part of the California Building Construction Standards and therefore impact nearly all newly constructed buildings, as well as to specific additions and alterations to nearly all existing buildings. Therefore, the Standards may eventually impact all business and individuals in the state that own buildings. We are unsure exactly how many such "businesses" are in California at any single point in time.

B. ESTIMATED COSTS

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime?

The amount listed on line 1 of $1,212 million is coincident with the $1,212,215,595 listed as the total on the Summary sheet of the 399 spreadsheet. This value is the sum of the residential and nonresidential measures costs for all newly constructed buildings, additions and alternations for 2014. The question specifies the "lifetime of the regulation," and these regulations are expected to have an extended lifetime. Staff considered and rejected interpreting the "regulation over its lifetime" to mean three to five years, which is the cycle of regular updates to the Standards, and instead opted to provide annual data. The life expectancy for residential and nonresidential buildings is assumed to be 30 years. For mechanical and electrical equipment in nonresidential buildings and outdoor lighting the life expectancy is assumed to be15 years.

1(a, b) Initial costs for a small business and initial costs for a typical business.

The Standards do not differentiate between a small business and a typical business but rather impact construction that may occur in nearly all public and private buildings in California. To provide this estimate, we calculated a weighted per square foot cost based on the proposed changes to the Standards, the types of nonresidential buildings the Standards would be applied to, and the estimated newly constructed buildings by nonresidential building type from 2012 through 2020. We then applied this weighted average cost per square foot ($3.02) to a hypothetical 15,000 square foot nonresidential building. A similar calculation was performed for nonresidential building additions and alterations to existing buildings. The additions and alternations cost is included in the statewide total dollar costs, but that cost is not reflected in the small business or typical business initial costs. The initial costs associated with the proposed Standards for newly constructed buildings will be substantially higher than the initial costs for additions and alterations in existing nonresidential buildings. To make a conservative estimate of the cost to a "typical business," the cost per square foot estimate was applied to a scenario that a "typical business" uses a 15,000 square foot newly constructed building. It should be noted that, assuming nonresidential

construction costs average $150 per square foot, the additional costs from the proposed Standards will increase the cost of the building by approximately 2%.

1(c) Initial costs to an individual.

The initial cost to an individual of $3,289 is based on the increased single family house average cost, which ranges, depending on climate zone it is built in, between $2,226 and $4,369 for a prototype single family home. The value listed in the summary, $3,289, is a weighted average for the single-family newly constructed buildings estimated for 2014. Low-rise multifamily buildings (those with three or fewer habitable stories) are subject to residential Standards; however, the costs of residential construction impacts ownership entities not individual tenants directly. If low-rise multifamily residential units are considered in the calculation, the average initial cost for an individual would be $2,224. Staff calculated the cost impact of the proposed Standards from additions and alterations activity using a multiplier estimate based on the ratio of dollar activity of residential newly constructed buildings to residential additions and alterations provided by the California Industrial Relations Board (see CIRB Data in the 399 spreadsheet). The costs of residential additions and alternations are included in the statewide total dollar costs, but are not reflected in the individual initial costs. The initial costs associated with the proposed Standards for newly constructed buildings will be substantially higher than the initial costs for additions and alterations to existing residential building.

4. **Will the regulation directly impact housing costs?**

The $2,224 value listed here is the average initial cost per housing unit (single family and low-rise multifamily) of estimated newly constructed housing in 2014. The number of housing units listed at 41,500 is a rounded up value that represents the total estimated 22,795 single family homes and the 18,747 multifamily units of newly constructed housing for 2014.

C. ESTIMATED BENEFITS

3. **What are the total statewide benefits from this regulation over its lifetime?**

The total statewide benefit listed on the Std 399 form is $1,684 million dollars, which is rounded from the 399 spreadsheet value of $1,684,816,566. This value is the sum of the time dependent energy valuation net present value energy savings for residential and nonresidential measures for all newly constructed buildings, additions and alternations for 2014. The question specifies the "lifetime of the regulation" and these regulations are expected to have an extended lifetime. Staff considered and rejected interpreting the "regulation over its lifetime" to mean three to five years, which is the cycle of regular updates to the Standards, and instead opted to provide annual data. The life expectancy for residential buildings measures is assumed to be 30 years. The life expectancy for residential and nonresidential buildings is assumed to be 30 years. For mechanical and electrical equipment in nonresidential buildings and outdoor lighting the life expectancy is assumed to be15 years.

D. ALTERNATIVES TO THE REGULATION

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not:

For more than thirty-five years, legislative enactments and state energy policies have directed the Energy Commission to adopt cost-effective building standards to improve energy efficiency and thereby improve the state's economy, energy security, and environment. (See, e.g., Public Resources Code sections 25007 and 25402(a)(1), (a)(3), & (b)(3); cite most recent IEPR.) At this time the Commission is not aware of alternatives to the proposed regulations that would be more effective than the proposed regulations in achieving the energy-efficiency goals of these directives, or that would be equally effective and have a lower adverse impact on small businesses (or on any other economic interests). However, it is quite likely that during the course of the rulemaking, the Commission will receive comments that are helpful in improving the proposed Standards. Moreover, during the initial, informal stage of the rulemaking process, the Commission conducted an extensive public process considered many suggestions from stakeholders about (1) alternatives that could improve the feasibility of the Commission's preliminary versions of the proposed regulations or could reduce their adverse impacts; (2) the technical and cost-effectiveness analyses of those preliminary proposals; and (3) the language in those proposals. The main suggestions and the Commission's responses are discussed in the Initial Statement of Reasons.

E. MAJOR REGULATIONS

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

The total cost value is identical to the amount listed on the first page under B1. The total savings value is identical to the amount listed on the second page under C3. Based on a cost of $1.212 million versus the benefits of $1.684 million the cost-effectiveness ratio is $1 costs to $ 1.38986544407881 benefits – which is represented by the rounded value in the Std 399 form of $1:$1.4.

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT

2 and 3. Additional expenditures and savings

These expenditures and savings values were calculated based on an estimate that 3 percent of the total costs of nonresidential newly constructed buildings, additions and alterations to existing buildings, would apply to local government. Based on these assumptions the expenditures per year in line 2 are estimated at $32.9 million while the annual savings are estimated on line 3 at $40.9 million.

A. FISCAL EFFECT ON STATE GOVERNMENT

1 and 2. Additional expenditures and savings

These expenditures and savings values were calculated based on an estimate that 1 percent of the total costs of nonresidential newly constructed buildings, additions and alterations to existing buildings, would apply to state government. Based on these assumptions the expenditures per year in line 2 are estimated at $10.8 million while the annual savings are estimated on line 3 at $13.6 million.

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