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Supplementary Document to Accompany Economic and Fiscal Impact Statement (STD. 399) for the Proposed Regulations for the California Energy Commission's Whole-Building Data Access, Benchmarking, and Public Disclosure Program

ECONOMIC IMPACT STATEMENT

Note: When used in this document, the term "staff" refers to staff of the California Energy Commission.

The table at the end of this document summarizes estimated statewide costs to implement this program.

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

3. Total number of businesses impacted: **31,200 (estimated)**

The proposed regulations include requirements for utilities and building owners.

There are 62 utilities in California providing electricity and natural gas. Staff estimate that in 2021, one year after full implementation of the regulations, (and the last year for which staff estimated costs) there will be an estimated 31,200 buildings for which the building owners will be required to report to the Energy Commission. Because a business may own multiple buildings, it is difficult to quantify the total number of businesses impacted. For the Form 399, staff assumed one business per disclosable building.

Number or percentage of total businesses impacted that are small businesses: estimated at **50%.**

According to the U.S. Small Business Administration (https://www.sba.gov/sites/default/files/advocacy/CA_1.pdf), half of California's private workforce is employed by small businesses. It is likely that the actual number of small businesses impacted is lower, as building ownership, and particularly large building ownership (disclosable buildings must be larger than 50,000 square feet) presumably increases as business size increases.

The proposed regulations do not require any new businesses to be created, and it is possible that all new jobs created by the proposed regulations will be within currently existing businesses.

6. Staff estimate that **151 jobs** will be created as a result of the proposed regulations.

Of the estimated 30,800 required disclosures in 2021, staff estimate that 70%, or 21,560, will be performed by external energy consultants, with the remainder being performed by internal employees of the building owners. Of those disclosures that will be performed by consultants, staff estimate a consultant completing one disclosure per day on average, and working 242 days per year on average. This results in approximately 89 jobs being created for energy consultants due to the proposed regulations.

Employees at each utility will need to verify each request for building energy use data, and send the requested data for requests that pass the verification process. Staff conservatively (meaning on the high side) estimates an average of one full-time equivalent per utility, for a total of 62 employees statewide.

There is no reason to believe that any jobs will be eliminated due to the proposed regulations.

Types of jobs or occupations impacted: There will be increased work for energy consultants who assist building owners with compliance, utility employees who will provide energy use data to building owners, and Energy Commission staff who will administer the program and provide guidance to building owners.

Staff estimate that the annual per-building cost for a building owner to comply with the proposed regulations will be between $100 and $1,500, which is unlikely to be significant enough to affect the ability of businesses to compete.

B. ESTIMATED COSTS

1. As the proposed regulations will require ongoing annual compliance, it would be impractical to calculate a lifetime cost. Staff calculated costs through 2021, which is one year after the proposed regulations would be fully implemented. The estimated cost to businesses to comply with this program for the period from 2016 to 2021 is shown below in nominal dollars:

2016	2017	2018	2019	2020	2021
$9,231,000	$3,980,000	$13,159,000	$21,234,000	$21,991,000	$22,776,000

1a. Staff have estimated the *average* cost to a building owner to comply with the proposed regulations in the first reporting year (2018 for commercial buildings and 2019 for residential buildings) at **$548** for owners of commercial buildings, and **$661** for owners of residential buildings. This cost will vary depending on the thoroughness of the benchmarking activity and the building being benchmarked, not on the size of the business that owns the building.

Though a building owner’s cost to comply with the proposed regulations will likely decrease after the first year, due to the set-up and learning curve parts of the benchmarking process already being complete, to be conservative, staff assumed the full cost for start-to-finish benchmarking in each year for which costs were estimated. Therefore, staff estimate that the ongoing annual cost of compliance for building owners in real dollars will be the same as in the first year.

1b. Because the cost of compliance with the proposed regulations by a building owner should not vary significantly based on the size of the business owning the building, staff estimates the initial and ongoing costs to comply with the proposed regulations for a typical business to be the same as those for a small business.

The first time a utility receives a request for energy use data for a building, the utility will need to associate the correct meters with that building and aggregate all accounts at the building level. For subsequent requests, utilities will simply need to update the associated meters. Utilities will incur initial costs ranging from zero (if a utility waited until it received a data request before associating energy usage with specific buildings) to approximately $2 million in the case of Pacific Gas and Electric Company (as reported to staff). Annual ongoing costs per utility could range from the low thousands of dollars for a utility with a small number of disclosable buildings in its territory, to hundreds of thousands of dollars for the largest utilities.

1c. Building owners may choose to pass their costs to comply with the proposed regulations on to building tenants in the form of higher rent and lease costs. If they do so, the cost to each tenant would be calculated by dividing the building owner's cost to comply by the number of tenants in the building. For a commercial building in the first year of required reporting, the cost per tenant would range from an estimated **$500** at the high end (for an average building with a single tenant) to a much lower number for a building with many tenants. For a residential building in the first year of required reporting, because the minimum number of utility accounts in a residential disclosable building is 17, the high end cost per tenant would be calculated by dividing the estimated cost of compliance for an average building of $661 by 17, resulting in approximately **$39** per tenant in 2019, with the cost in a building with many tenants being much lower.

Because staff assumed the cost of compliance in real dollars for building owners to remain the same over time, these costs should likewise remain the same if passed on to building tenants.

2. The proportion of estimated costs for each industry will vary during implementation of the proposed regulations, and are shown in the following table:

	2016	2017	2018	2019	2020	2021
Building Owners	0%	0%	75%	84%	85%	85%
Utilities	89%	76%	17%	11%	11%	11%
State Government	11%	24%	7%	5%	4%	4%

3. The proposed regulations impose reporting requirements on owners of certain buildings. Specifically, these owners will be required to transmit to the Energy Commission building characteristic and energy use information. The average cost incurred by building owners to complete this activity is the same as in 1a above; specifically, an estimated **$548** per commercial building in 2018, and **$661** per residential building in 2019.

4. The proposed regulations will not directly impact housing costs. If owners of disclosable residential buildings choose to pass their costs to comply on to tenants, there will be a minimal effect on housing costs. Specifically, as stated in 1c above, the maximum cost per tenant in a residential building should be $39 in 2019.

5. Assembly Bill 802 (Williams, Chapter 590, Statutes of 2015) requires the Energy Commission to create regulations to publicly disclose the benchmarking of energy use in buildings.

C. ESTIMATED BENEFITS

1. Because the proposed regulations do not require building improvements that would result in reductions in energy use, there are no quantifiable benefits that would directly result from the proposed regulations. However, the public disclosure of building energy performance will create an incentive for building owners to improve the energy efficiency of their buildings, which could lead to voluntary building improvements in some cases. The benefit that could arise from this regulation is improved building energy efficiency statewide, resulting in less demand for energy, thus reducing the environmental impact of operating buildings, including greenhouse gas emissions.

Further anticipated benefits of the proposed regulations are a wider understanding of the importance of building energy efficiency, and building energy efficiency becoming one of the common considerations when considering a building for purchase or lease.

2. AB 802 requires the Energy Commission to create regulations to publicly disclose the benchmarking of energy use in buildings.

3. It would be misleading to directly quantify benefits that will result from the proposed regulations. The U.S. Environmental Protection Agency has observed a 7% reduction in energy use during the period from 2008 to 2011 in 35,000 buildings entered in the EPA's Portfolio Manager online benchmarking tool. (https://www.energystar.gov/ia/business/downloads/datatrends/DataTrends_Savings_20121002.pdf?3d9b-91a5)

4. It is likely that the majority of building owners will choose to hire an external consultant to perform the actions required by the proposed regulations. There are currently companies in California performing similar services for building owners. As the proposed regulations will likely cause a significant increase in the demand for benchmarking services, these companies will likely expand.

D. ALTERNATIVES TO THE REGULATION

1. Alternatives considered:

    a. Alternative 1 would be for the Energy Commission to perform benchmarking for all disclosable buildings, rather than requiring building owners to perform benchmarking and report the results to the Energy Commission.

    b. Alternative 2 would be to not require benchmarking and public disclosure for buildings for which customer permission is required prior to public disclosure.

2. Total statewide costs and benefits from this regulation and each alternative considered:

a. Costs and benefits from the proposed regulations:

   (i) Staff estimate that the cost of complying with the proposed regulations in 2020, the first year of full implementation, will be **$21,991,000**.

   (ii) There are no quantifiable benefits that can be directly attributed to implementation of the proposed regulations.

b. Costs and benefits from Alternative 1:

   (iii) Staff estimate that the cost of complying with Alternative 1 in 2017, the highest cost year for Alternative 1, would be **$31,237,454**.

   (iv) There are no quantifiable benefits that can be directly attributed to implementation of Alternative 1.

c. Costs and benefits from Alternative 2:

   (v) Staff estimate that the cost of complying with Alternative 2 in 2021, the highest cost year for Alternative 2, would be **$18,559,000**.

   (vi) There are no quantifiable benefits that can be directly attributed to implementation of Alternative 2.

3. Quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives:

To estimate the costs for the alternatives, staff began with the estimated costs for the proposed regulations, and modified them as follows:

a. For Alternative 1, staff assumed that the costs incurred by building owners would be zero, and that the costs incurred by utilities would increase to include verifying that the energy use data utilities provided was associated to the appropriate buildings.

b. For Alternative 2, staff reduced the costs incurred by both building owners and utilities to reflect the removal from the program of buildings with two tenants as well as buildings with one tenant who is not the building owner.

4. An example of a performance standard in this context would be to require building owners to achieve a certain level of energy performance for their buildings, which is outside the scope of the statute. The proposed regulations require building owners to use the U.S. EPA's Energy Star Portfolio Manager online benchmarking tool, rather than giving them flexibility to use the tool of their choosing. Portfolio Manager is a national standard for benchmarking programs and will likely be familiar to many of the building owners who will be required to comply with the proposed regulations. Portfolio Manager produces a score that allows the energy performance of buildings nationwide to be compared, and is therefore the appropriate tool for this program.

E. MAJOR REGULATIONS

5.

a. The increase or decrease of investment in the State: It is likely that the proposed regulations will create an incentive for building owners to improve the energy efficiency of their buildings. This could result in increased investment in building auditing and improvement services.

b. The incentive for innovation in products, materials or processes: An increased demand for energy efficiency in buildings will likely create an incentive to increase innovation in the way building auditing and improvement services are delivered, as well as methods for monitoring and verifying building energy usage.

c. The benefits of the regulations: Increased awareness of the importance of building energy efficiency will likely create an incentive to reduce building energy use, from both improved energy efficiency and improved building occupant behavior. This could result in a decrease in energy use, a reduction in the pollution caused by energy production (including greenhouse gas emissions), and reduced energy costs paid by building occupants.

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT

2. The estimated cost to publicly owned utilities is $1,832,000 for the first year, and $1,099,000 for each of the following years. This is reflected in the first table on Page 7 as the combined annual costs for SCPPA utilities and non-SCPPA POUs.

This cost is not reimbursable because it applies equally to all utilities, public and private.

B. FISCAL EFFECT ON STATE GOVERNMENT

1. The legislature has approved funding of $972,000 (three full-time equivalent staff positions and $500,000 in contract funding) annually for implementation of the proposed regulations.

Estimated Costs to Implement Proposed Regulations

Utility Costs (Rounded to Nearest Thousand)	2016	2017	2018	2019	2020	2021
PG&E	$ 2,081,000	$ 887,000	$ 456,000	$ 487,000	$ 497,000	$ 504,000
Southern California Edison	$ 986,000	$ 657,000	$ 348,000	$ 446,000	$ 456,000	$ 468,000
SoCalGas	$ 1,510,000	$ 240,000	$ 240,000	$ 240,000	$ 240,000	$ 240,000
San Diego Gas and Electric	$ 1,850,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000	$ 125,000
SCPPA utilities	$ 1,250,000	$ 750,000	$ 750,000	$ 750,000	$ 750,000	$ 750,000
Non-SCPPA POUs	$ 582,000	$ 349,000	$ 349,000	$ 349,000	$ 349,000	$ 349,000
Total Utility Costs	**$ 8,259,000**	**$ 3,008,000**	**$ 2,268,000**	**$ 2,397,000**	**$ 2,417,000**	**$ 2,436,000**

Building Owner Costs (Rounded to Nearest Thousand)	2016	2017	2018	2019	2020	2021
Commercial Building Owners	-	-	$ 9,919,000	$ 10,328,000	$ 10,754,000	$ 11,197,000
Residential Building Owners	-	-	-	$ 7,537,000	$ 7,848,000	$ 8,171,000
Total Building Owners Costs	**-**	**-**	**$ 9,919,000**	**$ 17,865,000**	**$ 18,602,000**	**$ 19,368,000**

State Costs	2016	2017	2018	2019	2020	2021
Energy Commission approved funding	**$ 972,000**	**$ 972,000**	**$ 972,000**	**$ 972,000**	**$ 972,000**	**$ 972,000**

Total Statewide Costs	2016	2017	2018	2019	2020	2021
-	**$ 9,231,000**	**$ 3,980,000**	**$ 13,159,000**	**$ 21,234,000**	**$ 21,991,000**	**$ 22,776,000**

Key for This Table

	Provided by Utility (max of range)
	Energy Commission calculated
	Calculated on Supporting Data Tab
	Calculated on Supporting Data Tab using Costar
101.84%	Growth in Population of Disclosable Buildings (CBECS)
102.24%	Inflation (Department of Finance Consumer Price Index)
104.12%	Combined Population and Inflation