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California Energy Commission

INITIAL STUDY AND PROPOSED NEGATIVE DECLARATION

AMENDMENTS TO APPLIANCE EFFICIENCY REGULATIONS

Initial Study and Proposed Negative Declaration for Computers, Computer Monitors, and Signage Displays

California Code of Regulations Title 20, Sections 1601 – 1609

Docket # 16-AAER-02

California Energy Commission

Edmund G. Brown Jr., Governor

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CALIFORNIA ENERGY COMMISSION

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ABSTRACT

This initial study focuses on demonstrating that the proposed energy efficiency regulations for computers, computer monitors, and signage displays will not have any significant adverse effect on the environment. The initial study includes an environmental checklist supporting this finding. This report identifies and considers the potential environmental effects of adopting regulations for computers, computer monitors, signage displays, and battery charger systems.

Implementation of the proposed regulations for computers and computer monitors will result in a combined estimated reduction of 2,332 gigawatt-hours per year in electricity consumption after stock turnover. Lower electricity consumption results in reduced greenhouse gas and criteria pollutant emissions, primarily from lower generation in hydrocarbon-burning power plants, such as natural gas power plants. The energy saved by this proposal is estimated to avoid direct greenhouse gas emissions associated with electricity production by 0.731 million metric tons of carbon dioxide equivalent.

Keywords: Appliance Efficiency Regulations, energy efficiency, computers, computer monitors, signage displays.
Harinder Singh, Soheila Pasha. September 2016. Initial Study and Proposed Negative Declaration. California Energy Commission. CEC-400-2016-020.

PROPOSED NEGATIVE DECLARATION

Computers, Computer Monitors, and Signage Displays Appliance Efficiency Rulemaking

Public Resources Code § 25402, subdivision (c)(1), mandates that the California Energy Commission reduce wasteful, uneconomic, inefficient, or unnecessary energy use by prescribing, through regulation, standards for minimum efficiency levels for appliances. The Energy Commission adopted appliance efficiency regulations in 1976 and periodically adopts new or revised standards. The Energy Commission proposes to adopt new *Appliance Efficiency Regulations* (Section 1601 – 1609 of Title 20 of the California Code of Regulations) to establish efficiency standards for computers and computer monitors, and to clarify the scope of existing efficiency standards for signage displays and battery charger systems.

The California Environmental Quality Act (CEQA), found in Public Resources Code (PRC) Sections 21000 et seq., requires public agencies to identify and consider the potential environmental effects of their projects, as that term is defined and, when feasible, to mitigate any related adverse significant environmental consequences. The proposed adoption of these regulations is a discretionary action undertaken by a public agency and has the potential to result in a direct or indirect physical change in the environment. Thus, the proposed adoption of these regulations constitutes a project under CEQA. (See PRC Section 21065.) The Energy Commission has prepared this initial study to assess the potential significant effects of the proposed regulations on the environment.

The proposed regulations are contained in the following document:

Proposed Amendments to Appliance Efficiency Regulations (Express Terms), California Code of Regulations, Title 20, Sections 1601 Through 1609, Computers, Computer Monitors, and Signage Displays Appliance Efficiency Rulemaking, September 2016, Docket Number 16-AAER-02.

The proposed regulations are summarized in the notice of proposed action and are available with the express terms at http://www.energy.ca.gov/appliances/2016-AAER-02/rulemaking/.

The potential environmental impacts of the proposed regulations are analyzed in the attached document:

Initial Study and Proposed Negative Declaration - Amendments to Appliance Efficiency Regulations, California Code of Regulations, Title 20, Sections 1601 – 1609, September 2016, Docket # 16-AAER-02.

The documents listed above are available on the Energy Commission's website, http://www.energy.ca.gov/appliances/2016-AAER-02/rulemaking/, by phone at (916) 654-4147, or by electronic mail from the Energy Commission's Appliances and Outreach and Education Office, by submitting a request to Angelica.Romo@energy.ca.gov.

Finding of No Significant Impact

The initial study demonstrates and the Energy Commission concludes, that the proposed energy efficiency regulations for computers, computer monitors, and signage displays will not have any significant adverse effect on the environment. The attached initial study and environmental checklist support this finding.

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CHAPTER 1:
Introduction

The California Energy Commission was established in 1974 by the Warren-Alquist Act to develop and implement energy policy for the State of California. One of the Energy Commission's mandates is to promote water and energy efficiency through a variety of means, including efficiency standards for appliances. (PRC, Section 25402(c)(1)). The Energy Commission adopted its first appliance efficiency standards in 1976, and has periodically revised those standards as well as adopted new regulations. The current regulations include provisions on testing of appliances to determine efficiency, reporting of data by manufacturers to the Energy Commission, establishing mandatory minimum efficiency levels, and compliance and enforcement procedures, as well as general provisions on the scope of the regulations and definitions.

The proposed regulations include energy efficiency standards for computers and computer monitors, and clarifications regarding the scope of existing standards for signage displays and battery charger systems. The scope of the proposed regulations covers desktop computers (including integrated desktops and portable all-in-ones), notebooks (including gaming notebooks, two-in-one notebooks, and mobile workstations), small-scale servers, thin clients (including mobile thin clients), and workstations (including rack-mounted workstations), computer monitors (including gaming monitors and enhanced performance displays).

The California Environmental Quality Act (CEQA), found in PRC Sections 21000 et seq., requires public agencies to identify and consider the potential environmental effects of their projects, as that term is defined and, when feasible, to reduce any related adverse environmental consequences. Adoption of the proposed regulations is a discretionary decision undertaken by a public agency and has the potential to result in direct or indirect physical changes in the environment. Thus, it constitutes a project under CEQA. (See PRC, Section 21065.) Therefore, the Energy Commission has prepared this initial study to assess the potential significant effects of the proposed regulations on the environment.

Implementation of the proposed regulations will result in an estimated reduction of about 2,332 gigawatt-hours (GWh) per year in electricity consumption, in 2027 and after. It is estimated that the concomitant reduction in power plant operation in California would reduce criteria air pollutants: carbon monoxide (CO) by 298 tons, nitrous oxides (NO_x) by 152 tons, sulfur oxides (SO_x) by 24 tons, particulate matter less than 2.5 microns in diameter (PM2.5) by 30 tons, and volatile organic compounds (VOC) by 18 tons between 2018 and 2030.[1] Savings of 2,332 GWh a year equates roughly to a 550-megawatt power plant with 48 percent capacity

[1] David Roland-Holst, Samuel Evans, Cecilia Han Springer, Tessa Emmer 2016. Standardized Regulatory Impact Assessment: Computers, Computer Monitors, and Signage Displays. California Energy Commission. CEC- CEC-400-2016-008. Available at http://docketpublic.energy.ca.gov/PublicDocuments/16-AAER-02/TN212070_20160701T141710_Standardized_Regulatory_Impact_Assessment.pdf.

factor, which is

realistic for California where combined cycle plants don't operate at design intent levels but "industry standard" metric.

Based on the initial study showing the regulations will result in a reduction in air pollution, staff finds that the regulations will not have a significant impact on the environment, but will benefit the environment. Therefore, a negative declaration is the appropriate environmental document.

CHAPTER 2:
Description of Proposed Project

Project Name

This project is a statewide rulemaking proceeding titled: Computers, Computer Monitors, and Signage Displays Appliance Efficiency Rulemaking, Energy Commission Docket # 16-AAER-02.

Project Description and Location

The project proposes statewide regulations to establish levels of efficiency required for computers and computer monitors, and to amend existing regulations to clarify requirements for signage displays and battery charger systems. These products are not covered by federal appliance efficiency standards. The required new efficiency standards apply to newly manufactured products sold or offered for sale in California.

The proposed regulations apply to high expandability desktops, mobile workstations, small-scale servers, and workstation computers manufactured on or after January 1, 2018. The proposed regulations for these products have two hardware implications, requiring energy efficient Ethernet and 80 PLUS Gold or better power supply, and a software requirement for power management. The proposed regulations apply to all other covered computer types manufactured on and after January 1, 2019, with stringency of the standards for desktops, integrated desktops, thin clients, and gaming notebooks increasing for products manufactured on or after July 1, 2021. These requirements are performance standards and do not mandate any particular technology or component. Manufacturers will need to reduce the energy consumption in idle modes to meet the proposed standards. Potential efficiency improvements include using more efficient hardware components, such as hard-disk drives, power supplies, and graphics cards, and by using appropriate power management settings through software interactions.

The proposed regulations apply to computer monitors manufactured on or after July 1, 2019. The proposed regulations are performance standards that do not mandate a specific technology but that will require manufacturers to improve the energy efficiency of their products to meet the standards. Potential efficiency improvements include better backlight units, automatic brightness control, more efficient power supply, liquid crystal technology, and reducing the sleep and off mode power consumption. The proposed efficiency standards apply to all computer monitors that are used in residential and commercial buildings except those that are classified for use as medical devices by the United States Food and Drug Administration, very high performance monitors, or keyboard, mouse, monitor (KMMs) or keyboard, video, mouse (KVMs). The proposed regulations provide additional energy allowances for high-quality, low-volume computer monitors, such as enhanced performance displays, gaming monitors, curved monitors, and organic light-emitting diode monitors. The allowances are decreased on January 1, 2021, to drive additional efficiency improvements in these products.

The proposed regulations for signage displays merely clarify that these products are required to comply with the existing standards for televisions.

The proposed regulations for battery chargers clarify that certain types of non-consumer small battery chargers, specifically those battery chargers that are contained completely within a larger product and only provide power to retain data in the system memory but not power for full operation of the product, were not and are not intended to be included in the battery charger regulation. Standards for non-consumer small battery chargers have not taken effect yet, so this change maintains the status quo for these products.

The proposed regulations relevant to this initial study are contained in:

Proposed Amendments to Appliance Efficiency Regulations (Express Terms), California Code of Regulations, Title 20, Sections 1601 through 1609, September 2016. Computers, Computer Monitors, and Signage Displays Appliance Efficiency Rulemaking, Docket Number 16-AAER-02.

All of the documents associated with this rulemaking are available at: http://www.energy.ca.gov/appliances/2016-AAER-02/rulemaking/ or by electronic mail from the Energy Commission's Appliances and Outreach and Education Office. The office can be reached by contacting Angelica Ramos at (916) 654-4147 or at Angelica.Romo@energy.ca.gov.

CHAPTER 3:
Energy and Environmental Impacts of the Proposed Project

Energy Impacts

The energy savings for computers and computer monitors are characterized by the difference in efficiency between what these products consume today and what they would consume if they complied with the proposed regulation. Initially, all of the savings calculations for computers used the ENERGY STAR® dataset. However, as the proposed stringency of the computer standards for desktops changed over the course of the rulemaking, the energy savings calculation for the desktop computers relied on a dataset prepared by the Information Technology Industry (ITI), which dataset included computer models that were not certified to ENERGY STAR. Staff initially calculated the expected energy savings from its previous proposal using the new dataset, then worked to identify the effects of changes to the total energy consumption (TEC) levels on the expected energy savings. Staff applied the approximate savings to the ENERGY STAR database to calculate energy savings for desktop computers. For computer monitors, the energy savings were calculated using the ENERGY STAR dataset, which has a 93 percent market penetration and thus represents the majority of the models available on the market.

The energy efficiency standards being proposed for computers and computer monitors will reduce the future demand for electricity in the state. The efficiency standard will reduce electricity consumption by 2,332 GWh per year after stock turnover. Over the analysis period, from 2018 to 2030, in California, the cumulative energy savings from the proposed standards for computers alone are estimated to total about 16.22 terawatt-hours (TWh). The net direct savings to individuals and businesses is expected to be approximately $3.5 billion for the same period cumulatively.[2] Reduction in electricity would lead to a reduction in the need for new power plants, use of fossil fuels for those plants, and need for new transmission lines.

Products included in the scope cover a broad range of applications and form factors. However, as the standards only focus on the power consumption in idle modes, the products should be conducting relatively few, if any, specialized tasks in the regulated modes. Therefore, proposed regulations have no negative impacts on the function of the covered products.

No energy savings are estimated for signage displays, as the energy savings were considered as part of the 2009 rulemaking on televisions. The proposed regulations clarify that signage

[2] David Roland-Holst, Samuel Evans, Cecilia Han Springer, Tessa Emmer 2016. Standardized Regulatory Impact Assessment: Computers, Computer Monitors, and Signage Displays. California Energy Commission. CEC- CEC-400-2016-008. Available at http://docketpublic.energy.ca.gov/PublicDocuments/16-AAER-02/TN212070_20160701T141710_Standardized_Regulatory_Impact_Assessment.pdf.

displays must meet the television requirements but do not increase the stringency of those requirements or add new products into the scope considered under that rulemaking.

Environmental Impacts

The improvement in energy efficiency in computing is not likely to change the material composition of computers. In many cases, lower power consumption will lead to smaller computers and even less material use. Generally, the regulations are not designed to reduce maximum power; instead, they target only idle, sleep, and off mode power. However, some efficiency approaches to reducing idle power can lead to reductions in active mode power and, therefore, save some potential material and disposal impacts. That being said, the proposed regulations are not expected to have any major impact on electronic waste within the state.

Similarly, Energy Commission staff could not identify any safety or negative environmental impact of improving the efficiency of computer monitors and signage displays. While the technical feasibility section acknowledges the use of more efficient components and perhaps some additional control circuitry, those improvements would not create a particular waste hazard compared with existing components and circuitry.

The proposed standards will, however, lead to improved environmental quality in California. Saved energy translates to fewer power plants built, and less pressure on the limited energy resources, land, and water use associated with it. In addition, lower electricity consumption results in reduced greenhouse gas and criteria pollutant emissions, primarily from lower generation in hydrocarbon-burning power plants, such as natural gas power plants. The energy saved by this proposal is estimated to avoid direct greenhouse gas emissions associated with electricity production by 0.731 MMTCO2e per year.

CHAPTER 4:
No-Project Alternative

If the Energy Commission does not adopt energy efficiency standards for computers and computer monitors, and clarify the scope of existing regulations for signage displays and battery charger systems, California would forego the electricity savings that would result from the proposed regulations, including about 16.22 TWh for computers alone between 2018 and 2030, and consumer savings of $3.5 billion over the same period.

The annual release of criteria air pollutants (NO_x, SO_x, $PM_{2.5}$, VOC, and CO) would continue from power plants that generate electricity, both in California and across the western United States. The combined pollution for all criteria pollutants that would occur without these regulations is estimated to be 56.1 metric tons per year. Also, greenhouse gas emissions would not be reduced by 0.731 metric tons per year.

The estimated savings from the proposed standards are cumulative. Computers and computer monitors sold in one year continue to provide energy savings in future years, while each future year also contains new sales of these products. The savings and benefits are calculated based on the life cycle of the compliant products.

CHAPTER 5:
Environmental Checklist

Table 1: Lead and Responsible Agencies

Project Title	*Proposed Amendments to Appliance Efficiency Regulations (Express Terms), California Code of Regulations, Title 20, Sections 1601 Through 1609, October 16, 2015 Appliance Efficiency Rulemaking, Docket # 16-AAER-02*
Lead agency name and address	California Energy Commission, 1516 Ninth Street–MS 25, Sacramento, California 95814
Contact person and phone number	Soheila Pasha, Appliances and Outreach and Education Office, Efficiency Division, Soheila.Pasha@energy.ca.gov (916) 657-1002
Project description	The project is a proposal for statewide regulations to establish the levels of efficiency required for computers and computer monitors, which are not covered by federal appliance efficiency standards, and clarify the scope of existing regulations for signage displays and battery charger systems. The required new efficiency standards apply to newly manufactured products and are attainable through normal and existing manufacturing processes.
Responsible agencies	None
Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement)	None

Environmental Factors Potentially Affected

For each of the environmental factors checked in **Table 2**, there is likely to be a positive environmental impact due to the decrease in power generation associated with reduced electrical demand by the use of more efficient appliances. The Energy Commission's analysis reveals no significant adverse impacts.

Table 2: Potentially Affected Areas

	I. Aesthetics	x	VII. Greenhouse Gas Emissions		XIII. Population/Housing
	II. Agriculture Resources		VIII. Hazards & Hazardous Materials		XIV. Public Services
x	III. Air Quality	x	IX. Hydrology/ Water Quality		XV. Recreation
x	IV. Biological Resources		X. Land Use/ Planning		XVI. Transportation/Traffic
	V. Cultural Resources		XI. Mineral Resources	x	XVII. Utilities/Service Systems
	VI. Geology/Soils		XII. Noise		XVIII. Mandatory Findings of Significance

Issues

Table 3: Specific Potential Issues

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				X
COMMENT: The proposed regulations will have no impact to aesthetics and no impact on any of the specific concerns listed above.				
II. AGRICULTURE RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland, to nonagricultural use or conversion of forest land to non-forest use?				X
COMMENT: The proposed regulations will have no impact to agricultural resources and no impact on any of the specific concerns listed above. These regulations do not require land, including forest or agriculture land, to convert to other uses.				
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
e) Create objectionable odors affecting a substantial number of people?				X
COMMENT: The proposed regulations will have no adverse impact to the air quality concerns listed above. The proposed efficiency standards will result in reduced power plant operation and related facility emissions in California as compared to no standards.				
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
COMMENT: The proposed regulations will have no impact on biological resources and no impact on the specific concerns listed above. The proposed regulations do not require land, including wetlands or habitat, to convert to other uses.				
V. **CULTURAL RESOURCES** -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside formal cemeteries?				X
COMMENT: The proposed regulations will have no impact on any cultural resources and no impact on any of the specific concerns listed above. The proposed regulations do not require land, including burial grounds or archaeological/paleontological sites, to convert to other uses.				
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to *Division of Mines and Geology Special Publication 42*.				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
COMMENT: The proposed regulations will have no impact to geology and soils and no impact on the specific concerns listed above. The proposed regulations do not require changes to land use that might affect its seismic or stability characteristics.				
VII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X
b) Conflict with an applicable plan, policy or regulation adopted for the services of reducing the emissions of greenhouse gases?				X
COMMENT: The proposed regulations will have no adverse greenhouse gas emissions effects. The proposed regulations are part of state policy to reduce greenhouse gas emissions. The regulations will reduce greenhouse gas emissions by an estimated 0.731 MMTCO2e/yr. As part of its Standardized Regulatory Impact Assessment for the proposed regulations, the Energy Commission used a macroeconomic model (Berkeley Energy and Resources (BEAR) model) to assess the effect of the regulations on the state's economy. The model concluded that because cost-effective energy efficiency standards save consumers money on their electric bills, those additional funds would be reinvested into the state's economy, including in sectors that may have greenhouse gas emissions, such as transportation and manufacturing. These results are speculative as to any individual actor, as it is difficult to predict how a consumer will spend the savings from his or her electricity bills. However, the modeling demonstrates the importance of comprehensive greenhouse gas policies across all sectors, as any activity that causes economic growth will necessarily cause a downstream increase in greenhouse gas emissions without these policies. As the project itself does not generate greenhouse gas emissions, directly or indirectly, and as the project is consistent with state policies to reduce greenhouse gas emissions from the electricity sector, staff concludes that there is no significant adverse impact on greenhouse gas emissions from the proposed regulations.				

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
VIII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
h) Expose people or structures to a significant risk of loss, injury; or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
COMMENT: The proposed regulations will have no impact on hazards and hazardous material. The proposed regulations do not alter the way in which these materials are disposed.				
IX. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or-off-site?				X
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X
COMMENT: The proposed regulations will have no impact on hydrology and water quality and no impact on any of the specific concerns listed above. The proposed regulations do not require land, including flood zones and drainage, to be altered.				
X. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the services of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
COMMENT: The proposed regulations will have no impact to land use and planning and no impact on to any of the specific concerns listed above. The proposed regulations do not require land, including habitat and community development sites, to convert to other uses.				
XI. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X
COMMENT: The proposed regulations will have no adverse impact to mineral resources and no impact on any of the concerns listed above. The proposed regulations do not require land, including mineral-rich land, to convert to other uses.				
XII. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
COMMENT: The proposed regulations will have no noise impact and no impact on the specific concerns listed above.				
XIII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
COMMENT: The proposed regulations will have no impact on population and housing and no impact on any of the concerns listed above.				

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
XIV. PUBLIC SERVICES -- Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				X
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X
COMMENT: The proposed regulations will not require the construction or alteration of governmental buildings in a way that will cause significant negative environmental impact. This reduction in energy consumption will lead to environmental benefits by reducing greenhouse gas emissions, criteria pollutant production, and the need to site and construct new power plants.				
XV. RECREATION -- Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
COMMENT: The proposed regulations will have no impact on recreation and no impact on any of the specific concerns listed above. The proposed regulations do not require park or recreational land to convert to other uses.				
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the country congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
COMMENT: The proposed regulations will have no impact on transportation/traffic and no impact on any of the specific concerns listed above.				
XVII. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers' existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?				X

	Potentially Significant Impact	***Less Than Significant With Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
COMMENT: The proposed regulations will have no adverse impact on any of the concerns listed above. By reducing electricity use, the proposed regulations will have beneficial effects on energy utilities by reducing the need to procure additional electricity generation and increased reliability.				
XIX. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				X
COMMENT: The proposed regulations will have no adverse impact on any of the concerns listed in the above checklist. No potential exists for any adverse impacts on any animal or human populations, and none of the impacts are cumulatively considerable. Improvements in the energy efficiency of computers and computer monitors resulting from the proposed standards are likely to result in beneficial impacts including reduced electricity consumption, reduced power plant operation, and reduced need to build power plants and power lines in the future.				

CHAPTER 6:
Determination

On the basis of this evaluation:

X	I find that the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signing Officer:

Robert P. Oglesby
Executive Director

Signature_____Date_____

APPENDIX A:
Matrix of Proposed Changes to Appliance Efficiency Standards and Resulting Energy and Environmental Effects

Table A-1: Matrix of Proposed Changes

	Appliance Type	***Existing Standard***	***Proposed Standard or Description of Changes***	***Estimated Energy Effects***	***Potential Environmental Issues***
1	Computers	Currently there are no existing standards for computers.	For desktop and notebook computers, the proposed requirements establish a maximum total energy consumption allowance for computers based on a baseline energy plus applicable adders. For workstations and small-scale servers, the proposed regulations establish design requirements to improve the efficiency of the products.	The regulations, by 2027, would result in annual savings of 1,636 gigawatt-hours (GWh) of electricity. This equates to roughly $262 million per year in savings to California businesses and individuals.	EMISSIONS: Emissions reductions in criteria pollutants from both standards are (NO_x, SO_x, CO, PM2.5, VOC) estimated to be 56.1 tons per year. Greenhouse gas emissions are reduced by 0.513 million metric tons of carbon dioxide equivalent (CO2e) annually.
2	Computer Monitors,	There are no existing standards for computer monitors.	The proposed requirements establish a maximum on mode, sleep mode, and off mode power consumption	The regulations, by 2027, would result in annual savings of 696 gigawatt-hours (GWh) of electricity. This equates to roughly $111 million per year in savings to California businesses and individuals.	EMISSIONS: Emissions reductions in criteria pollutants from both standards are (NO_x, SO_x, CO, PM2.5, VOC) estimated to be 22.4 tons per year. Greenhouse gas emissions are reduced by 0.218 million metric tons of carbon dioxide equivalent (CO2e) annually.
3	Signage Displays	There are existing standards for televisions, which are intended to include signage displays.	The proposed standards clarify that signage displays are required to meet television standards.	No energy effects are anticipated from this clarification, as the energy savings were previously incorporated into the 2009 rulemaking for televisions.	None.
4	Battery Charger systems	There are existing standards for battery charger systems.	The proposed standards exclude a battery charger that is contained completely within a larger product and only provides power to retain data in the system memory but not providing power for full operation of the product.	No energy effects are expected from this exclusion because these products were never intended to be included in the scope of covered battery chargers.	None.

APPENDIX B:
References

California Energy Commission. 2016. Dataset of computer models submitted by Information Technology Industry Council.

California Energy Commission, Initial Statement of Reasons, Proposed Amendments to Appliance Efficiency Regulations, California Code of Regulations, Title 20, Sections 1601 through 1609, 2016 Appliance Efficiency Rulemaking, Computers, Computer Monitors, and Signage Displays, September 9, 2016, Docket Number 16-AAER-02.

California Energy Commission, Notice of Proposed Action, Proposed Amendments to Appliance Efficiency Regulations, California Code of Regulations, Title 20, Sections 1601 through 1609, 2016 Appliance Efficiency Rulemaking, Computers, Computer Monitors, and Signage Displays, September 9, 2016, Docket Number 16-AAER-02.

Order Instituting Rulemaking, Order # Order 12-0314-16, March 4, 2012; Docket # 12-AAER-2, available at http://www.energy.ca.gov/appliances/2012rulemaking/notices/prerulemaking/2012-03-14_Appliance_Efficiency_OIR.pdf.

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Proposed Amendments to Appliance Efficiency Regulations (Express Terms), California Code of Regulations, Title 20, Sections 1601 through 1609, 2016 Appliance Efficiency Rulemaking, Computers, Computer Monitors, and Signage Displays, September 2016, Docket Number 16-AAER-02.

Roland-Holst, David, Samuel Evans, Cecilia Han Springer, Tessa Emmer. 2016. Revised Standardized Regulatory Impact Assessment: Computers, Computer Monitors, and Signage Displays. California Energy Commission: CEC-400-2016-008.

Singh, Harinder, Ken Rider, and Soheila Pasha. 2016. Final Analysis of Computers, Computer Monitors, and Signage Displays. California Energy Commission. CEC-400-2016-016.

APPENDIX C:
Glossary of Terms

CEQA – California Environmental Quality Act

CO – Carbon Monoxide, a gas generated from incomplete combustion processes including fossil fuel combustion. The primary concern is the effect of chronic low emission levels on local air quality, as contrasted with the potential acute health hazard posed by direct inhalation of concentrated CO.

CO_2 – Carbon Dioxide, a gas generated from normal combustion processes including fossil fuel combustion. Primary concern is its effect on global climate change.

Gigawatt-hour (GWh) – One thousand megawatt-hours, or one million kilowatt-hours, or one billion watt-hours of electrical energy.

Megawatt (MW) – One thousand kilowatts, or one million watts of power.

MMTCO2e – Million metric tons of carbon dioxide equivalent, which is a measurement of the amount of carbon dioxide.

NO_x – Oxides of nitrogen, usually NO and NO2, which are gases generated from incomplete combustion processes including fossil fuel combustion. Primary concern is as a chief component of air pollution, contributing specifically to ground-level ozone (O_3), smog, and acid rain (through formation of nitric acid).

PM_{10} – Solid particulate matter defined as having a mean aerodynamic diameter of 10 microns or smaller. Generally considered pollutants, particulates are released from combustion processes in exhaust gases including those generated by fossil fuel plants, by mobile sources such as automobiles, and by other fugitive particle sources.

$PM_{2.5}$ – Solid particulate matter defined as having a mean aerodynamic diameter of 2.5 microns or smaller. Similar in most respects to PM_{10} but with somewhat different effects on biology and health.

SO_x – Sulfur oxides, a group of gases generated from the combustion of sulfur. Trace quantities of sulfur are found in virtually all fossil fuels, and are combusted when the fuels are burned. Primary concern is as the pollutant primarily responsible for acid rain (through formation of sulfuric acid).