Comments of
Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California

CEC Docket Number: 14-AAER-02

Proposed Regulations for Computers, Computer Monitors, and Electronic Displays

October 24, 2016

In extensive initial comments[1] in this docket, the consumer commenters[2] reviewed the analysis presented by the staff of the California Energy Commission (CEC) to set minimum efficiency standards for important household digital devices – computers, monitors and laptops. We evaluated the proposed standards and found them to deliver significant benefits to consumers, the economy and the environment.[3] A year later we concluded that the staff presented an improved analysis.[4] Since our thoughts on these analyses are already in the record, we will not review them here in detail.

In making these evaluations, we underscored that our approach is to take a uniquely consumer pocketbook view of standards and to apply a rigorous set of tests to the standard. We have developed this set of tests through our long experience and involvement in rulemakings across a wide range of products and issues. We review existing studies of technologies to determine whether there are significant potential consumer savings. Our analysis combines a

[1] Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California, Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 5/29/2015. (hereafter Consumer Group Comments)

[2] Consumer Federation of America is an association of more than 250 nonprofit consumer groups that was founded in 1968 to advance the consumer interest through research, advocacy and education. In our comments we were joined by three consumer groups.

[3] We provided empirical analysis in an attachment entitled "Electricity Consumption and Energy Savings Potential of Consumer Digital Devices: The Role of California Appliance Standards Leadership."

[4] Statement of the Consumer Federation of America for The California Energy Commission Staff Workshop on Computers, Computer Monitors and Electronic Displays (Docket Number: 14-AAER-02, TN #: 210913), April 26, 2016

review of the technical economic studies, prepared by others, and evidence on the market performance of appliances and electronic devices.

A detailed explanation of this framework was presented in a lecture at the CEC's Energy Academy, entitled "Energy Efficiency Performance Standards: Driving Consumer and Energy Savings in California" [5] and an excerpt from that analysis was presented to the CEC in our formal comments in this docket.[6] Focusing on the consumer pocketbook, we always start from a basic set of questions:

- What is the problem that the proposed standard addresses?
    - Out analysis showed, and recent data from the CEC staff confirm, that these devices are an increasingly important factor in consumer electricity bills. These devices constitute a significant part of electricity bills, from 2.5% - 4.4% including uneconomic waste. Of equal importance, these devices account for 7% of the electricity consumed by commercial establishments and those costs are recovered from consumers in the price of the goods and services they buy.
    - Exhibit 1 briefly summarizes our analysis of why the energy consumption of consumer digital equipment tends to be at uneconomic levels due to the market imperfections that afflict these devices.
- How can the standard be best designed to achieve the goal?
    - Exhibit 2 briefly describes our analysis of how performance standards can address these market failures.

[5] February 20, 2014.
[6] Consumer Group Comments, Attachment B

EXHIBIT 1: THE ELECTRICITY CONSUMPTION OF HOUSEHOLD DIGITAL DEVICES IS A PARTICULARLY DIFFICULT PROBLEM FOR THE MARKETPLACE TO SOLVE.

Externalities: Ultimately, the benefit of reducing energy consumption has value beyond the benefit that each individual directly enjoys from reduced energy consumption (a public goods problem).

Bundling/Agency: The manufacturers of the products make the key decisions about energy consumption and the bundle of attributes that will be made available in the market, thereby constraining the range of energy consumption levels the consumer has to choose from (principal agent problems).

Agency/Access to Capital: The manufacturers tend to focus on the primary product attributes and the first cost of the device, ignoring the life cycle cost (i.e. the total of acquisition and operating costs) since they do not pay the electricity bills. The manufacturers' interests are separate and different from the consumers' interests (split incentives problem).

Risk: Moving efficiency into mass market products runs the risk of being underpriced by inefficient products.

Imperfect Information/Motivation: The electricity consumption of these devices is not visible to consumers. The devices are purchased for their functionalities, which, given the dramatic increase in penetration and use, are highly desirable. The level of electricity consumption is not an attribute of the product to which consumers will pay much attention (a shrouded attribute problem).

Calculation: Even if consumers are paying attention to energy use, it would be difficult for them to determine how much energy the devices use and the impact of reducing consumption. The information is either not readily available or the transaction cost of obtaining it is high (information and transaction cost problems).

Source: Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California**,** Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 10/24/2016, p. 5

EXHIBIT 2: STANDARDS CAN PLAY AN IMPORTANT ROLE. THEY ADDRESS ALL FOUR OF THE BARRIERS IDENTIFIED.

Standards put a floor under the level of energy consumption, without dictating which technologies can be utilized.

Consumers do not have to master the economics of the level of energy consumption of the device.

Because all manufacturers must abide by the same rule, there is less risk of adding the cost of the energy savings technology to the product.

Producers who are better at adding technology at lower cost may benefit.

Competition can be stimulated around the standard and may even go beyond it as the standard raises awareness.

Source: Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California**,** Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 10/24/2016, p. 7

- Will a standard save consumers money?
    - Our analysis of the consumer benefits of the proposed standards leads us to conclude that they will result in substantial consumer savings. Standards for consumer products, desktop, monitory, notebook all have:
        - Benefit cost ratios from 2.3 to 6.1
        - Payback periods of less than 2 years
        - Break even at less than half the asset life

- However, the literature points out that performance standards have positive effects if they are well-designed, enforced and updated. We generally prefer performance standards because they command, but they do not control by setting a goal and allowing manufacturers flexibility to decide how to meet the goal. Exhibit 3 briefly describes the key principles for the design of performance standards to ensure they are effective.

EXHIBIT 3: KEY DESIGN FEATURES OF EFFECTIVE PERFORMANCE STANDARDS

Long-Term: Setting an increasingly rigorous standard over a number of years that covers several redesign periods fosters and supports a long-term perspective. The long term view lowers the risk and allows producers to retool their plants and provides time to re-educate the consumer.

Product Neutral: Attribute based standards accommodate consumer preferences and allow producers flexibility in meeting the overall standard.

Technology-neutral: Taking a technology neutral approach to the long term standard unleashes competition around the standard that ensures that consumers get a wide range of choices at that lowest cost possible, given the level of the standard.

Responsive to industry needs: The standards must recognize the need to keep the target levels in touch with reality. The goals should be progressive and moderately aggressive, set at a level that is clearly beneficial and achievable.

Responsive to consumer needs: The approach to standards should be consumer-friendly and facilitate compliance. The attribute-based approach ensures that the standards do not require radical changes in the available products or the product features that will be available to consumers.

Procompetitive: All of the above characteristics make the standards pro-competitive. Producers have strong incentives to compete around the standard to achieve them in the least cost manner, while targeting the market

Source: Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California, Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 10/24/2016, Attachment B: Excerpt From Energy Efficiency Performance Standards: The Cornerstone of Consumer-Friendly Energy Policy, pp. 32-33.

In our earlier comments we concluded that the standards proposed by the CEC embodied these principles of standard design.

> [T]here are specific products available that already meet the standard. In fact, a small but significant percentage of products in the market already meet the standard.
>
> The standards focus on reducing energy consumption when the computer/display is not operating – i.e. in the off, sleep and idle modes. The comments also demonstrate "no regrets" approaches – such as setting defaults at the lowest level possible and automatic transitioning to lower levels of energy consumption when

> the computer is idle. This is a cautious approach which means the standards should not impair the ability of the computer to deliver the functionality that consumers want. This analysis provides strong evidence that the standard is technically feasible and not detrimental to consumers.
>
> Based on the structure of the standard, its relationship to the current product market, and the benefit cost ratios, the proposed standards pass our test with flying colors on the most important of the characteristics. The benefits far exceed the costs, and they are product neutral, technology-neutral, and procompetitive. We also believe that they are responsive to consumer needs and industry needs, but these aspects deserve more attention. The targets set by these standards are moderate; if anything, our analysis suggests to us that the commission should go a little farther.
>
> The standards are forward looking, but not very far, and the industry suggests that it needs more time to comply. This suggests to us that the judicious course for the CEC could well be to set standards that become progressively stronger over a number of design and build cycles. This gives the industry an opportunity to plan more significant changes or a sequence of changes that eases the glide path to higher levels of efficiency.[7]

In these comments (specific to the final Staff Report and proposed regulations issued on September 9, 2016), we note that the CEC continued to develop the approach by conferring with all stakeholders, a process that has continued to improve the standard in a number of ways.

- The design and refresh cycle has been given more weight.
- The unique needs of consumers and demand in the marketplace has been recognized.
- The industry has come to support the standards.
- These developments provide strong justification for our support of the process and our opposition to ill-considered legislative efforts that would have weakened the CEC's ability to arrive at a pro-consumer, pro-environment outcome that will also help the industry.

Given the course of events and the continuing improvement of the proposed standards, we believe it is important to recall our analysis of why California is ideally suited to write the first-in-the-nation standard for computers.

> California is a large enough market to get the attention of the product manufacturers.

[7] Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California, Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 5/29/2015, pp. 9…12

> Not only is the California economy large even on a global scale, but the Silicon Valley in Northern California has a special place in the digital revolution, so it is likely to get the broad attention of policy makers.
>
> Given the experience of the past quarter of a century, there is a great deal of experience with this type of standards setting process in California.
>
> The fact that the California IOUs have conducted extensive analysis and proposed a set of standards that achieves significant savings reflects this history and bodes well for the process.[8]

But the Commission's work is not done. The Lead Commissioner's Public Meeting on October 10, 2016, revealed several important issues that remain to be addressed. Having arrived at a nuanced approach that allows more flexibility, some are concerned about how these complex incentives will affect manufacturer behavior. The Commission must be vigilant about how it will play out in the marketplace. We believe the vast majority of the members of the industry will not abuse that flexibility or game the system, as the significant support expressed by the industry suggests. Even so, the CEC should adopt an aggressive market monitoring program that estimates and subsequently tracks the "normal" rate of increase in niche or exempt products and those entities that have been afforded flexibility. The CEC should consider requiring the proper sales data from industry in order to effectively monitor the market trends. The monitoring should trigger an immediate proceeding should their market shares increase significantly beyond the expected trend. Even if such a break in the trend is simply a "market" process, the CEC should react swiftly to it, because the underlying market imperfections persist, and the magnitude of potential consumer savings grows as the product becomes mainstream and the cost of greater efficiency can be expected to decline as economies of scale take hold.

[8] Comments of Consumer Federation of America, Consumers Union, Consumer Action and Consumer Federation of California**,** Docket Number: 14-AAER-02, Project Title: Computer, Computer Monitors, and Electronic Displays, TN #: 20385333, Date: 10/24/2026, Attachment A: Mark Cooper, Research Brief electricity Consumption and Energy Savings Potential of Consumer Digital Devices: The Role of California Appliance Standards Leadership, February 2014, pp. 21, 24.

Others have expressed concerns that the sequencing of the monitor and computer rules are out of sync. To the extent that the Commission finds this to be a problem, it should seek to ameliorate it, but under no circumstances should it delay the monitor rule.

We appreciate being a part of this process and the opportunity to provide comments from the consumer perspective on the CEC's proposed regulations for computers, monitor and electric displays. We look forward to the issuance of strong and effective standards by the end of the year.

Respectfully Submitted,

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