

Economic Analysis of Senate Bill 17-089

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Proposed Colorado Senate Bill 17-089 gives electricity consumers the right to install and use electricity storage systems on their property. This paper will discuss the purpose and the effects of allowing consumers to store electricity. To determine if this bill should be passed, it must be concluded that the effects of increased electricity storage are beneficial to society.

Senate Bill 17-089 ensures consumers the right to install and use electricity storage units without being subjected to regulations or additional utility fees. In Colorado, electricity can be provided via utilities, either private or municipal, and cooperative electric associations. Installed electricity storage sys

The second function of the electrical storage unit is it allows consumers to use cheaper electricity in times of peak demand. In 2013, the average family in Colorado paid 84 dollars for electricity every month¹. Electricity prices fluctuate based on demand levels, which can vary widely on both a seasonal and day-to-day basis. Prices of electricity are nearly ten percent higher in the summer than in the winter. Based on the average monthly electricity bill and price fluctuations, strategically using saved electricity that was purchased in times of reduced demand can potentially reduce the monthly electric bill by up to ten dollars a month. Being able to use stored electricity effectively allows the consumer to choose the cheapest available price for electricity.

While the individual can benefit from reduced costs by storing electricity, the aggregate effect of widespread energy storage can lead to decreases in the market price of electricity.

In addition to decreased operational costs, decreases in total operational power plants would lower the social cost of producing electricity. According to the EPA, “The electric power sector accounted for 32% of U.S. total greenhouse gas emissions ... fossil fuel-fired power plants are the largest source of U.S. CO₂ emissions”³. A report on the external costs of coal electricity plants determined that, “combining all of the pollutants into damages per kilowatt-hour of electricity produced ... the median estimate was \$0.14

However, if consumers are able to store electricity, then they can take advantage of the fluctuating prices and purchase and store low-priced electricity. As a result, consumers with stored electricity then have the choice as to which price to pay for electricity at any given moment, thus restricting the monopolists pricing power.

In response, utilities are incentivized to increase costs against consumers with storage units in order to recoup lost revenue. However, the bill protects electricity storage consumers against additional charges from utility companies. In order for a utility company to impose additional charges on an electric storage user, the same charge must be applied to all similar situated customers who don't have electric storage units. As a result, customers who use storage systems cannot be punished for doing so. In addition,

use, costs \$1,600. Despite the long term potential for saved money, the up-front costs of these products are likely to minimize the total quantity of systems in use.

It would increase the benefit of the bill if amendments were added that included additional incentives to increase the output of electricity storage systems. Amendments could be made to subsidize the production of these systems thereby reducing costs and lowering prices. The second option would be to offer additional incentives to consumers, such as tax credits or write-offs, in order to increase consumption.

While these amendments would increase the output of electrical storage systems, the bill effectively protects consumers who install these units from additional utility fees or other regulations. By doing so, the bill will help reduce stress on the electrical grid and in turn decrease the number of power plants in operation. In addition, consumers will have an increased ability to determine the price they pay for electricity. Due to the net benefit to society, SB17-089 should be passed.

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