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California State Assembly

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Wednesday, March 30th
1:30 p.m. – State Capitol, Room 437

INFORMATIONAL HEARING

Pocketbooks and the Power System: Managing Future Rate Impacts

Over the last few months, many Californians have experienced record high electric and gas bills. Some customers have reported a doubling or tripling of their bill even when their usage did not change.¹ Most of these bill increases came unexpectedly, shocking many Californians already struggling with inflation and economic uncertainty from an extended global pandemic. While early analysis attributes the steep rise in global natural gas prices as the main driver of these high energy bills,² electric rate increases were also being approved simultaneously at the California Public Utilities Commission (CPUC).³ These compounding pressures—some controllable, some not—raise concerns that energy bills may soon reach a breaking point for many Californians.

The topic of rising energy rates is not new to the Legislature, state regulators, or the utilities. In early 2020, this Committee held an informational hearing raising concerns over our high electricity prices and their potential to be a barrier to future emission reductions.⁴ Numerous legislative efforts have also been passed attempting to address these concerns, most recently providing almost \$1 billion in relief for customer energy debt accrued during the pandemic.⁵ Over the last two years the CPUC has held workshops on rates and affordability, posing solutions to try to address these forecasted increases.⁶ However, affordable energy is not only

¹ “Here’s why your PG&E gas bill might be high this month,” Caroline Morales, ABC 10, February 8, 2022; “Conserving Electricity Not Necessarily Helping Lower SDG&E Bills,” Dana Griffing and Nicholas Kjeldgaard, NBC 7, February 17, 2022; “More elected leaders voicing frustration over SDG&E skyrocketing bills,” Steve Price, CBS 8, February 16, 2022.

² CPUC “Fact Sheet – Pacific Gas and Electric Company: 2022 Electric & Gas Rates,” February 24, 2022.

³ P&GE: D. 22-02-002; SDG&E: D. 21-12-040; SCE: D.22-01-003.

⁴ “Electricity Prices Matter,” Assembly Committee on Utilities and Energy Informational Hearing, February 19, 2020.

⁵ AB 135, Committee on Budget, Chapter 85, Statutes of 2021.

⁶ CPUC *En Banc* on Energy Rates and Costs, February 24, 2021, <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/en-banc-rates-and-costs>; and CPUC *En Banc* on Affordability – Evaluating Innovative Proposals for Cost Containment and Customer Protections, February 28—March 1, 2022, <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-to-hold-hearing-on-affordability-of-essential-utility-services-2022>

essential to meeting our clean energy and decarbonization goals, but has real life and death consequences. After two years of global pandemic, Californians are acutely aware of the essential need for utility service. As a result, evaluating how best to manage our future energy rates is critical. *The purpose of this hearing is to examine what is driving these increases in rates, discuss what increases to expect in the future, and highlight current thinking around solutions to help manage these costs.*

While a comprehensive evaluation of energy cost impacts should include electric and natural gas rates, along with other fuel (gasoline, propane) costs, for ease of discussion this hearing will only focus on electric rate impacts. The pressures experienced in electric rates provide a good foundation to understanding the pressures in energy costs broadly. Additionally, this hearing's scope will be narrowed to only the electric rate impacts projected for the large investor-owned utilities (IOU) – Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E). Missing from this discussion is the publicly-owned utilities, which make up approximately a quarter of electric load in the state, the Community Choice Aggregators (CCA), which serve over 11 million customers or approximately 28% of IOU load,⁷ and customers that receive electricity directly from an electric service provider or generate their own electricity on site.

Findings

- *California's IOU electric rates are among the highest in the nation and are projected to only get higher over the coming decade.*
- *While understanding rates is important, tracking actual bills is a better measure of affordability, and actual bills have also been increasing.*
- *Increases in electric rates not only have the potential to slow our decarbonization efforts, but may force dire decisions upon vulnerable populations.*
- *Many solutions have been proposed to address the projected rate increase. Which solutions should be prioritized, and whether the benefits of implementing the reforms will truly be realized, must be appropriately considered.*

The Electric Bill. California's IOU electric rates are among the highest in the country.⁸ SCE's per kilowatt hour residential prices are about 45% higher than the national average; PG&E's are about 80% higher; and SDG&E's are roughly 100% higher.⁹ While these rates are high, the actual electric bill the average residential and industrial customer pays are below the national average,¹⁰ largely attributable to California's mild climate and strong commitment to energy efficiency driving down energy usage.

⁷ As reported by CalCCA's website on March 23, 2022. Load migration may shift these numbers after publication. <https://cal-cca.org/>

⁸ Borenstein, S., Fowlie, M., and Sallee, J., "Designing Electricity Rates for an Equitable Energy Transition," *Energy Institute at Haas* working paper WP 314, February 2021.

⁹ Pg. 4, *Ibid.*

¹⁰ Data from the U.S. Energy Information Administration EIA-861 schedules 4A-D, EIA-861S and EIA-861U; https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf and https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_c.pdf

Regardless, recent research by the University of California, Berkeley’s Energy Institute at Haas and NEXT 10 concluded California’s high rates are roughly two to three times the costs it takes to produce the electricity.¹¹ This misalignment between price and costs may confuse many customers, as the costs imbedded in an electric bill grow more removed from the cost of delivering the electricity, and any effort by an individual to reduce consumption might bear little change to their billing.

It is therefore important to understand what is currently included in an electric bill. A typical residential electric bill is comprised of three components¹²:

1. Procurement Costs – the costs to purchase electricity.

2. Transmission & Distribution (T&D) – the costs to move the electricity to homes and businesses; some of these costs are approved by the CPUC, some by the Federal Energy Regulatory Commission (FERC).

3. Public Purpose Surcharge & Other – costs for policies and programs paid by electric ratepayers, such as the California Alternate Rates for Energy Program (CARE) which provides a bill reduction for qualified low-income customers, and various energy efficiency and research programs, among others.

These costs combine to make an average residential electric bill such as what is shown in Figure 1 from PG&E.¹³

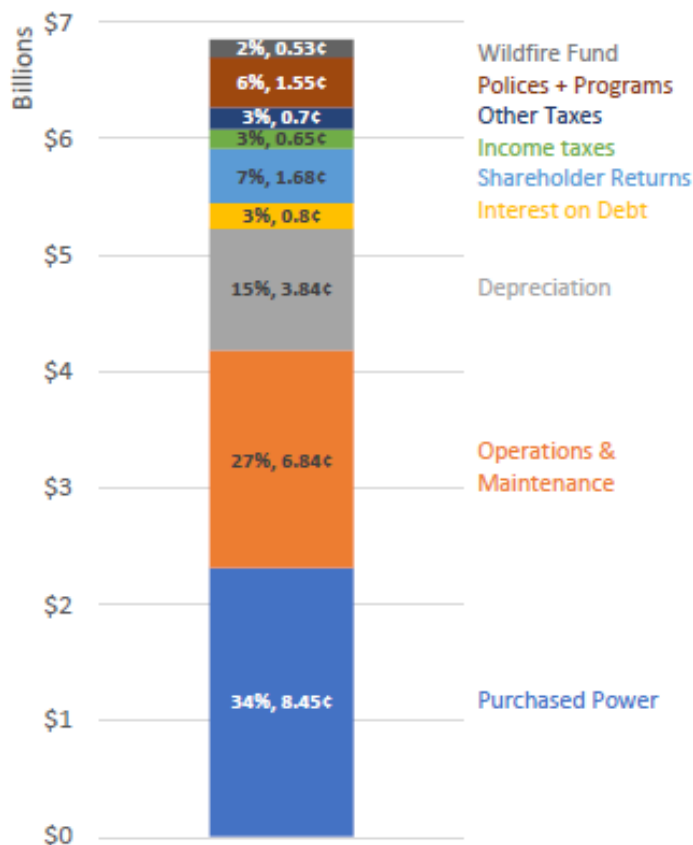


Figure 1 - PG&E's Bundled Revenue Requirement

¹¹ Pg 4, citation 8 - Borenstein 2021.

¹² While this basic categorization of costs reflects major areas of utility operations, it is also used to determine what portions of utility costs should be paid by different types of customers. For instance, some customers do not receive full or bundled service from the utility and may generate their own electricity on site or buy electricity from a non-utility source (e.g., an Electric Service Provider (ESP), or a CCA). Customers who receive electricity from a CCA or ESP do not typically pay generation costs but do pay transmission and distribution costs. However, these customers are also required to pay non-bypassable charges for generation procured on their behalf before they departed from bundled service. Additionally, some larger customers receive service at transmission voltage levels and are not charged for use of the utility distribution system.

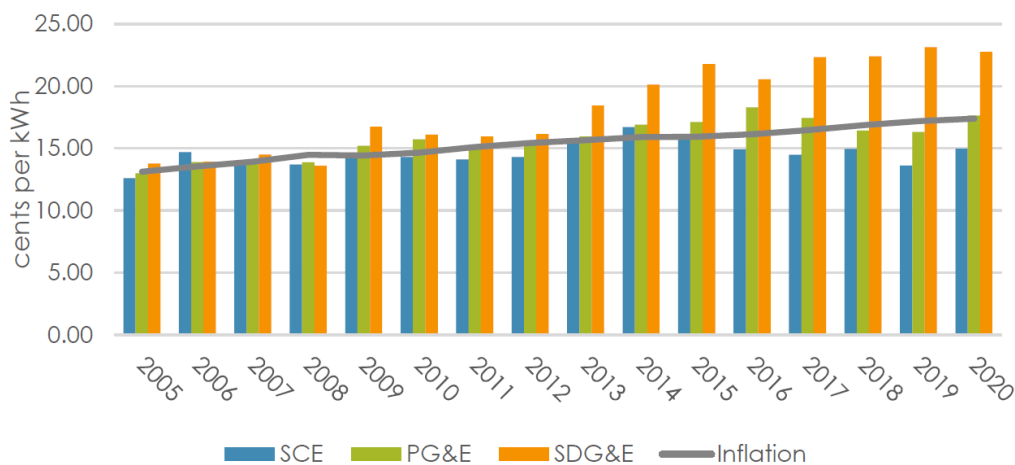
¹³ As reported in February 28, 2022 presentation by NRDC Scientist Mohit Chhabra, “Analyzing (some) Policy Levers for Affordable Decarbonization,” CPUC *En Banc*, Panel 3. Data from PG&E’s FERC Form 1 filings (2020 and earlier); 2022 Annual Electric True-Up; 2020 GRC Cost of Service.

The CPUC reviews and approves electric IOU costs and revenues through a variety of the public processes. The most notable include the Energy Resource and Recovery Account (ERRA) and the General Rate Case (GRC) proceedings. ERRA proceedings are used to reconcile estimated versus actual fuel and purchased power costs. The electric IOUs do not earn a rate of return on these costs, and only recover actual costs. The costs are forecasted for the year ahead. If the actual costs are lower or higher than forecasted, then the electric IOU credits or charges customers, respectively, for the difference. GRC proceedings are used to address the costs of operating and maintaining the electric system and the allocation of those costs among customer classes. For California’s electric IOUs, the GRCs are parsed into two phases. Phase I of a GRC determines the total amount the electric IOU is authorized to collect, while Phase II determines the share of the cost each customer class is responsible and the rate schedules for each class.

Historical Trends. Across all three IOUs, rates have increased since 2013.¹⁴ The growth in rates can be largely attributed to increases from infrastructure projects.¹⁵ The utilities have also made major financial commitments to wildfire mitigation and transportation electrification, but these costs are only beginning to be reflected in rates.

As shown in Figure 2, for almost the last decade the rates¹⁶ of the utilities have not tracked with inflation. Beginning in 2009, SDG&E’s rates have risen above the Consumer Price Index, while SCE’s and PG&E’s have vacillated above and below. Comparing rates to inflation is a common metric of energy affordability. Household incomes are generally expected to increase at the rate of inflation, so rates outpacing inflation suggests energy bills will become less affordable over time.

Figure 2 - Electric Total System Average Rates (2005-2020)¹⁷



¹⁴ Bundled system average rate; by 37% for PG&E, 6% for SCE, and 48% for SDG&E. Pg. 7; “Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021.

¹⁵ Transmission by PG&E and distribution by SCE and SDG&E; *Ibid.*

¹⁶ Total System Average Rates, which reflect total authorized revenue requirement and total forecasted sales for both bundled and unbundled customers.

¹⁷ Pg. 9, CPUC “2020 California Electric and Gas Utility Costs Report – AB 67 Annual Report to the Governor and Legislature,” April 2021.

This historical increase in average rates persists even when broken into each customer class. As shown in Figure 3, for all three IOUs each customer class shows the same upward trend as the system average rate over this period, with residential and small business customers generally bearing the greatest impact of this increase.¹⁸

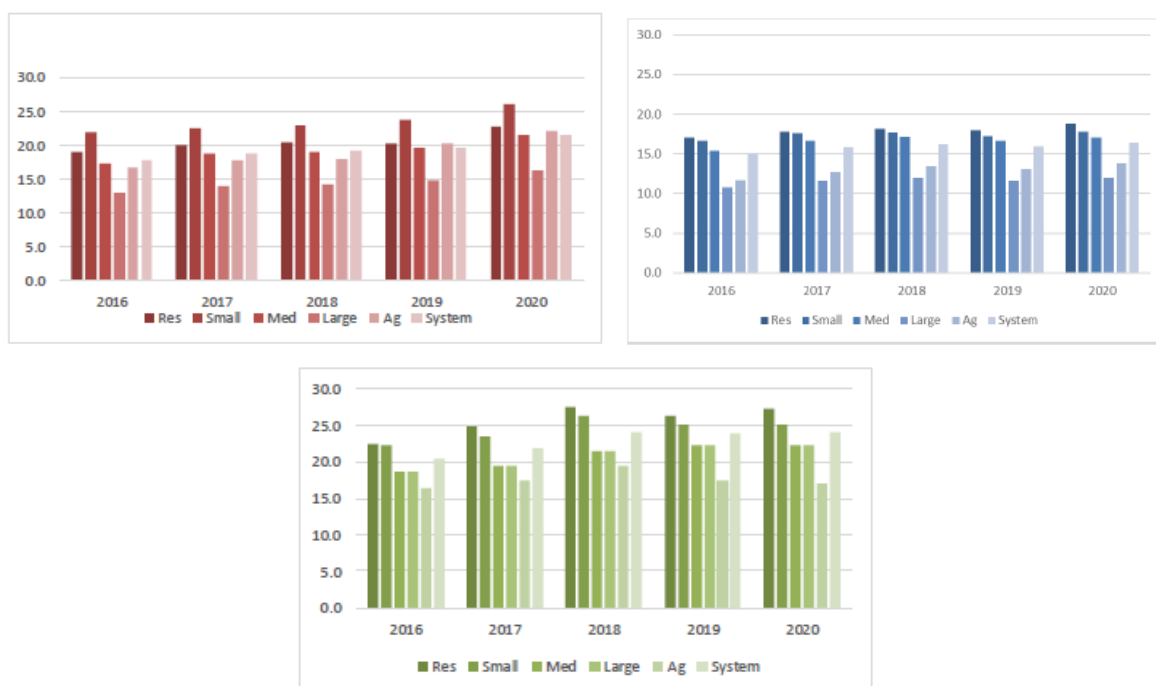


Figure 3: Bundled Average Rate by Customer Class (¢/kWh) – PG&E (top left, red); SCE (top right, blue); SDG&E (bottom middle, green)¹⁹

While understanding *rates* is important, tracking actual *bills* is a better measure of affordability. California bills have typically been lower than most of the country in recent years, but those trends are changing. In 2019, both PG&E and SCE saw their bundled residential average monthly bill rise in nationwide rankings of 200 IOUs. SDG&E was the exception, with its monthly bill ranking lower, even though its rate is among the top 20 highest.²⁰

Looking into the Future, Protecting the Most Vulnerable. While the current high electric bills experienced by California customers raise concern, the projection of future rate impacts are more troubling. By 2030, bundled residential rates are forecasted by the CPUC to be much higher than they would have been if 2020 rates had grown at the rate of inflation.²¹ These forecasts largely attribute this increase to capital expenditures (infrastructure build) and wildfire mitigation. However, these forecasts rely on fairly conservative assumptions

¹⁸ Pg. 14-16, “Utility Costs and Affordability of the Grid of the Future : An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021

¹⁹ Pg. 14-16, “Utility Costs and Affordability of the Grid of the Future : An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021

²⁰ Pg. 11, “Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021.

²¹ Approximately 12 percent higher for PG&E, 10 percent for SCE, and 20 percent for SDG&E. Pg. 43, “Utility Costs and Affordability of the Grid of the Future : An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021.

about future utility expenditures that could underestimate the actual rate increases expected in the future.²²

Over the past months, the CPUC has approved electric rate increases that support these forecasts: an approximately 19% increase for PG&E, 16% increase for SCE, and 7% increase for SDG&E.²³ Much of these increases are attributed to ballooning natural gas commodity prices;²⁴ however a portion of these increases arose from FERC approved transmission costs and wildfire mitigation expenses.

The projected growth in electricity costs over the next decade suggests that many Californian households may struggle with energy affordability. These high rates might make it more expensive for a business to produce goods or discourage adoption of electric vehicles and electric appliances. For customers most acutely impacted by changes to their electricity bills—such as low-income customers, customers in hot climate zones, medically vulnerable customers, or customers in public housing—these higher costs can have dire consequences. Failure to pay electricity bills and the resulting potential for disconnections can lead to critical medical equipment shutting off, the potential for heatstroke during a heatwave, or even the loss of custody of children to the state. Energy shutoffs in California increased by over 50% from 2010-2017.²⁵ During the first two years of the COVID-19 pandemic, disconnections were suspended; but they have recently been reinstated. In the 2021 budget, the Legislature authorized almost \$1 billion in energy debt relief in order to prevent some of these potential disconnections,²⁶ yet customer debt was only partially covered by these funds.

Are current solutions to address affordability adequate? The primary existing policy to help low-income customers pay their energy bills is the CARE program. Households enrolled in CARE receive a 30-35% discount on their electric bill and a 20% discount on their natural gas bill. While CARE provides a reduction in electricity and natural gas bills, it does not guarantee an affordable bill. In fact, the recently approved electric rate increases mentioned above resulted in approximately the same level of increase for CARE customers as those not enrolled in CARE.²⁷

Other IOU affordability programs include the Family Electric Rate Assistance program, which offers an 18% discount on electric bills if household income slightly exceeds CARE allowances; the Energy Savings Assistance program, which provides no-cost weatherization services to customers who meet the CARE income limits; the Low-Income Home Energy Assistance Program, which provides weatherization services and cash to help low-income

²² “...the forecasts generally incorporate known program changes and assume a small escalation factor for remaining activities...”pg. 57, “Utility Costs and Affordability of the Grid of the Future : An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1,” CPUC, February 2021.

²³ Data request of the CPUC to this Committee, March 1st rate change estimated increase for a PG&E average non-CARE residential bundled customer is 11.3% plus the 8.1% from the Jan. 1 rate change; March 1st rate change estimated increase for a SCE average non-CARE residential bundled customer is 13.6% plus the 2.9% from the Jan. 1 rate change; and Jan. 1st rate change estimated increase for a SDG&E average non-CARE and CARE residential bundled customer was 6.9%.

²⁴ Natural gas commodity prices impact electricity rates by driving up natural gas electric generation costs.

²⁵ TURN, “Living Without Power: Health Impacts of Utility Shutoffs in California,” May 2018, http://www.turn.org/wp-content/uploads/2018/05/2018_TURN_Shut-Off-Report_FINAL.pdf

²⁶ AB 135, Committee on Budget, Chapter 85, Statutes of 2021

²⁷ An approximately 19% increase for PG&E, 17% increase for SCE, and 7% increase for SDG&E.

customers pay their bills;²⁸ Emergency Assistance Programs, where some gas and electric IOUs offer cash assistance and special payment plans to consumers facing financial hardship; the Medical Baseline program where qualifying customers are billed a certain amount of their energy usage at their IOU's lowest rate; and various customer energy management programs, such as energy efficiency and demand response.

The CPUC is also currently piloting a novel affordability program, the Percentage of Income Payment Plan (PIPP), which allows a participant to pay a predetermined affordable percentage of their monthly income toward their utility electricity or natural gas bill.²⁹ PIPP participants will receive a monthly bill cap for current charges set at four percent of their household's monthly income.

While these programs assist many Californians in making energy more available, they often fail to ensure affordability for target populations. Moreover, they reach only a subset of ratepayers—those most vulnerable. The projected rate increases discussed previously show *all* ratepayers, especially low-usage residential ratepayers, are expected to experience much of these rate increases.

What novel solutions do we have to mitigate these increases? Recognizing the historic and forecasted trends to California's rates, the CPUC has held a series of workshops, issued staff whitepapers, and consulted with academics and researchers to develop a set of solutions that might alleviate this troubling trend.³⁰ Those efforts identified problem areas that require careful management:

- Clean Energy Infrastructure Investments – Across all three IOUs, infrastructure investments are increasing, driven by rising transmission investments for PG&E and distribution investments for SCE and SDG&E. Regulators must manage the costs and timing of fulfilling clean energy and electrification mandates, or risk bill increases that may make policy goals difficult to achieve. The CPUC did find transportation electrification programs have had little impact on bundled residential rates.³¹
- Wildfire Mitigation Expenses – Historical experience with wildfire costs is largely based on SDG&E, since SDG&E's experience with wildfire spending precedes that of the other two IOUs. Despite a decade of spending, SDG&E's wildfire costs have continued to increase, which may indicate what is likely in store for PG&E and SCE.
- Distributed Energy Resource (DER) incentives – There is the potential for a growing divide in the cost of service between customers participating in DER and those who are less likely to do so. Moderate- to higher-income customers are more likely to invest in DERs such as solar photovoltaic systems, electric vehicles, and storage

²⁸ LIHEAP can offer a one-time payment to help customers pay heating or cooling bills or in an emergency, such as a utility disconnection. LIHEAP can also provide in-home weatherization services for improved energy efficiency, and health and safety.

²⁹ D.21-10-012

³⁰ CPUC Energy Rates and Costs En Banc, February 24, 2021 and CPUC Affordability En Banc February 28-March 1, 2022.

³¹ Pg. 10, "Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1," CPUC, February 2021.

technologies, and the sophisticated rates that support them. This enables these customers to shift load and take advantage of the billing benefits that result. This results in a cost shift toward the non-participating customers, often lower-income and otherwise vulnerable customers.³²

The need to improve the safety and reliability of the electric system while meeting California’s climate goals will require novel solutions and planning to ensure electric service remains affordable. State decisionmakers must delicately balance these intersecting policy areas in order to avoid unintended consequences. Recently proposed solutions include:

- Non-ratepayer sources of funding – moving categories of IOU spending, such as wildfire mitigation, transportation electrification, or public purpose programs, out of rates and fund them through the General Fund, point-of-sale requirements, or surcharges.
- Ratemaking reform – implement concrete changes to rate collection, such as creating an income-graduated fixed charge, reducing the IOU return on equity, and modifying DER incentives to lessen the cost-shift to non-participants.
- Better Planning – taking a more systems-view approach to grid planning, such as emphasizing resource attributes beyond least-cost and maximizing existing infrastructure, including demand response, energy efficiency, central procurement entities, and better western-wide coordination.

California’s electricity sector is in a period of transition. It will be necessary to develop policies that ease the transition for customers, particularly for the most vulnerable, to ensure we meet our goals as quickly and affordably as possible. This hearing will provide an opportunity to examine these solutions.

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³² Pg. 9, *Ibid.*