Panel Two: What Strategies for Cost Control or Reduction Do We Need to Explore?

Moderator: Leuwam Tesfai, Chief of Staff & Legal Advisor to Commissioner Shiroma

Panelists:

- Robert Kenney, Vice President, Pacific Gas and Electric Company
- Carla Peterman, Senior Vice President Southern California Edison Company
- Scott Crider, Chief Customer Officer, San Diego Gas & Electric Company
- Jennifer Dowdell, Senior Policy Expert, The Utility Reform Network
- Betony Jones, Advisor, NextGen Policy and CEO, Inclusive Economics
- Rick Umoff, Senior Director & Counsel, Solar Energy Industries Association

CPUC EN BANC – FULL PANEL HEARING

Robert Kenney
VP, Regulatory and External Affairs, PG&E

February 24, 2021

Cost-Savings Focus Areas

To mitigate upward rate pressure in the near term, PG&E has identified a set of operational efficiencies that we estimate can save an average of $1 billion per year through 2025.

Average estimated savings of $1B per year through 2025

Process Redesign

- Work and resource planning
- Contract management

$4.9B through 2025

Energy Costs

- Monetization of excess renewable energy

$0.8B through 2025

Real Estate & Other

- Surplus property disposition
- Headquarters redesign

$0.8B through 2025

2020 Highlight

- Realized $129.4M in excess renewables sales for 2020

Safety is PG&E's highest responsibility. PG&E's commitment to safety will not be compromised for cost reductions or other efficiencies.

Sale of Wireless Attachment Licenses in Early 2021

Additionally, PG&E recently announced an agreement with SBA Communications Corporation to sell wireless attachment license agreements for an upfront lump sum.

Sale expected to generate

$973 million

in initial proceeds

Approximately half of proceeds will be returned to customers through lower monthly bills

Selling these licenses is a way for PG&E to strengthen its balance sheet, reducing our financing needs to benefit customers

PG&E and SBA also entered into a strategic relationship to market and sublicense equipment at additional wireless attachment locations

Work on PG&E's electric transmission infrastructure will continue to be performed by trained, qualified electrical workers

Safety is PG&E's highest responsibility. PG&E's commitment to safety will not be compromised for cost reductions or other efficiencies.

Electric Costs & Rates En Banc (Panel 2)

Southern California Edison

February 24, 2021

SCE Remains Committed to Providing a Critical Service and Pursuing Cost Management Efforts

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023+

O&M and Capital

Portfolio Optimization (Fuel and Purchased Power)[1]

SCE is investing in capabilities that will help realize further cost efficiencies over time

Continuous Improvement
Lean Sigma, Yellow/Black Belt Training

Digital Accelerator
Digitize operations to increase efficiencies

Asset Management
Framework to further ensure resources are optimally allocated and realize most value over lifecycle of assets

Risk Management
Risk-based modeling to buy down most risk at least cost (e.g. wildfire mitigation)

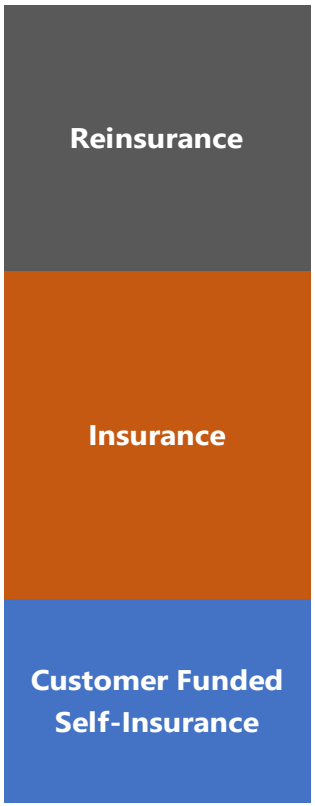
1) Portfolio optimization savings include contract terminations and deferrals

SCE's Long-Term Cost Drivers

Overarching Goals	SCE Cost Drivers	
Safe, Reliable, and Affordable Electric Service	**Infrastructure Replacement**	Sustained investment required to reach and maintain equilibrium replacement rate
	Wildfire Mitigation	Significant investment in infrastructure and practices that mitigate wildfire risk and bolster prevention and response
Decarbonization of California	**Grid Modernization**	Increased electrification requires capacity and modernization to harness full potential of DERs
	Electrification of Transportation and Other Sectors	Investments to support electrification of light-, medium-, and heavy-duty vehicles and other sectors
	Energy Storage	Energy storage essential to increasing carbon-free generation
	Transmission	Future needs to meet renewables and clean energy mandates driven by CAISO planning process

Wildfire Self-Insurance

Illustrative Insurance Tower $1 Billion



- Typical insurance program has multiple layers, and claims are paid sequentially by layer
- Commercial insurance premiums have increased rapidly over the last few years due to the frequency of CA wildfires, more construction in the wildland urban interface, inverse condemnation, climate change, drought, and forest management issues
- As a result, premiums for some layers may be well above the expected loss in those layers[1]
- Using customer funded self-insurance for some of those layers could reduce costs for customers over time
- If there are no claims in a self-insured layer, customers save the entire premium for that layer and those dollars can be used to fund self-insurance again the next year (in contrast to commercial insurance, where premiums are paid every year)
- Funding needs to be established on a multi-year basis since claims payments and customer savings will vary year by year

1) Expected losses over time to be determined by modeling and third-party actuarial analysis

Electric Costs and Rates in California

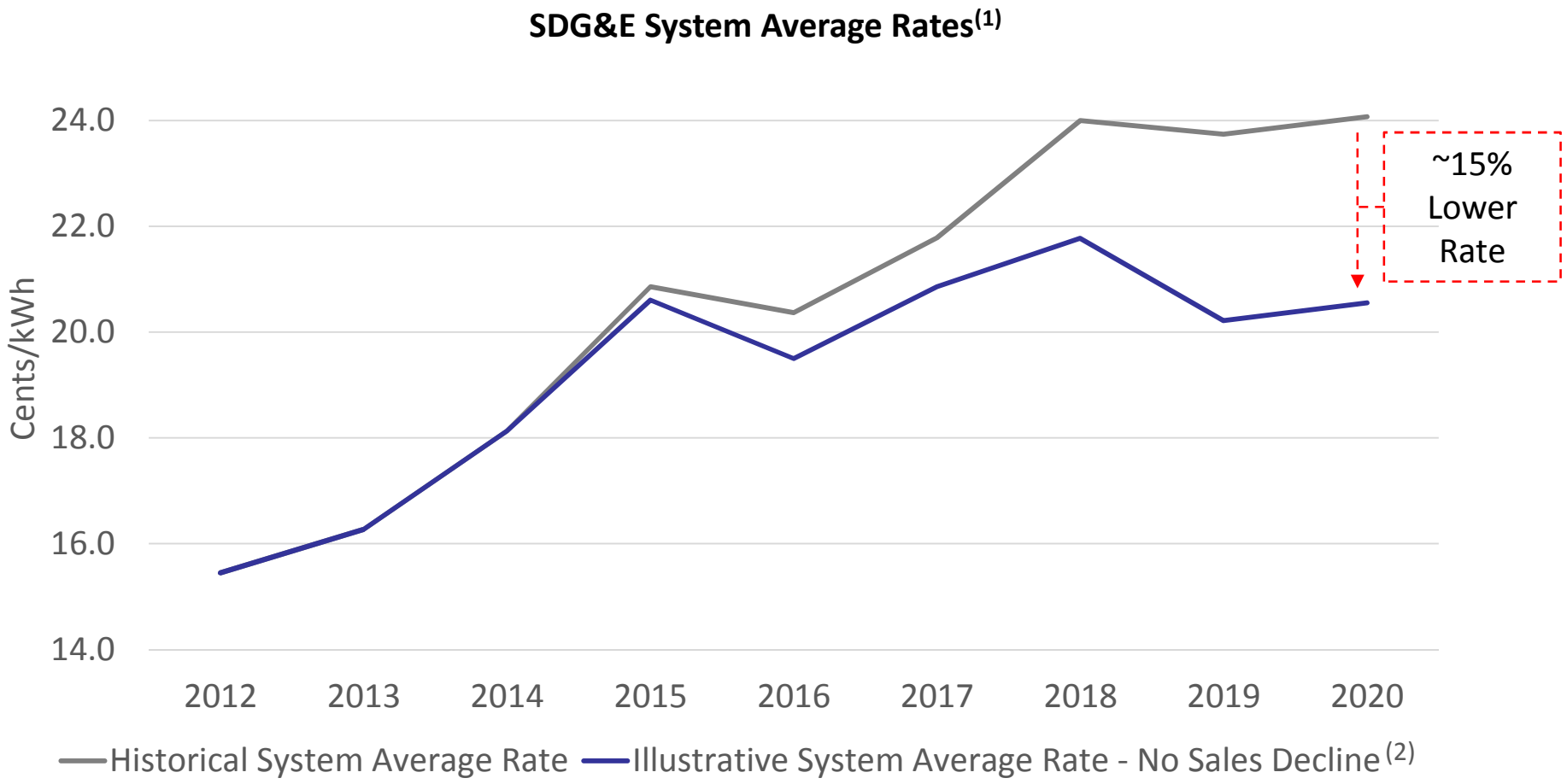
California Public Utilities Commission
February 24, 2021

Technology and Efficiency

Deployment of next generation technologies and analytics drive operational efficiencies while delivering improved safety performance and enhanced customer service

Initiative	Description	Efficiency and Value
Drone Investigation Assessment & Intelligent Image Processing	• Drones provide enhanced view of grid assets • Artificial intelligence processing millions of images to detect damage near real-time	• Improved grid assessment using fewer employees • Faster reliability risk identification • Lowers future cost of inspections and repairs
Robotic Process Automation	• Automate manual and repetitive tasks • Future includes machine learning to automate more complex tasks	• Improved speed and accuracy • Maximizes employee contribution • ~700,000 hours of labor capacity saved by 2024
Modernized Customer Service	• Cloud-based customer management systems • New digital experience and more self-service tools • Virtual service agents	• Improved service at lower cost • Faster deployment of new services • Meets evolving customer expectations • Maintain non-technology options for customers without access
Wildfire Next Generation System	• Advanced risk modeling tool evaluates likelihood of wildfire and PSPS down to segment level • Prioritizes mitigation based on risk spend efficiencies	• Provides for cost efficient investments in wildfire mitigations • Improves assessment of wildfire safety and methods to limit PSPS impacts on customers

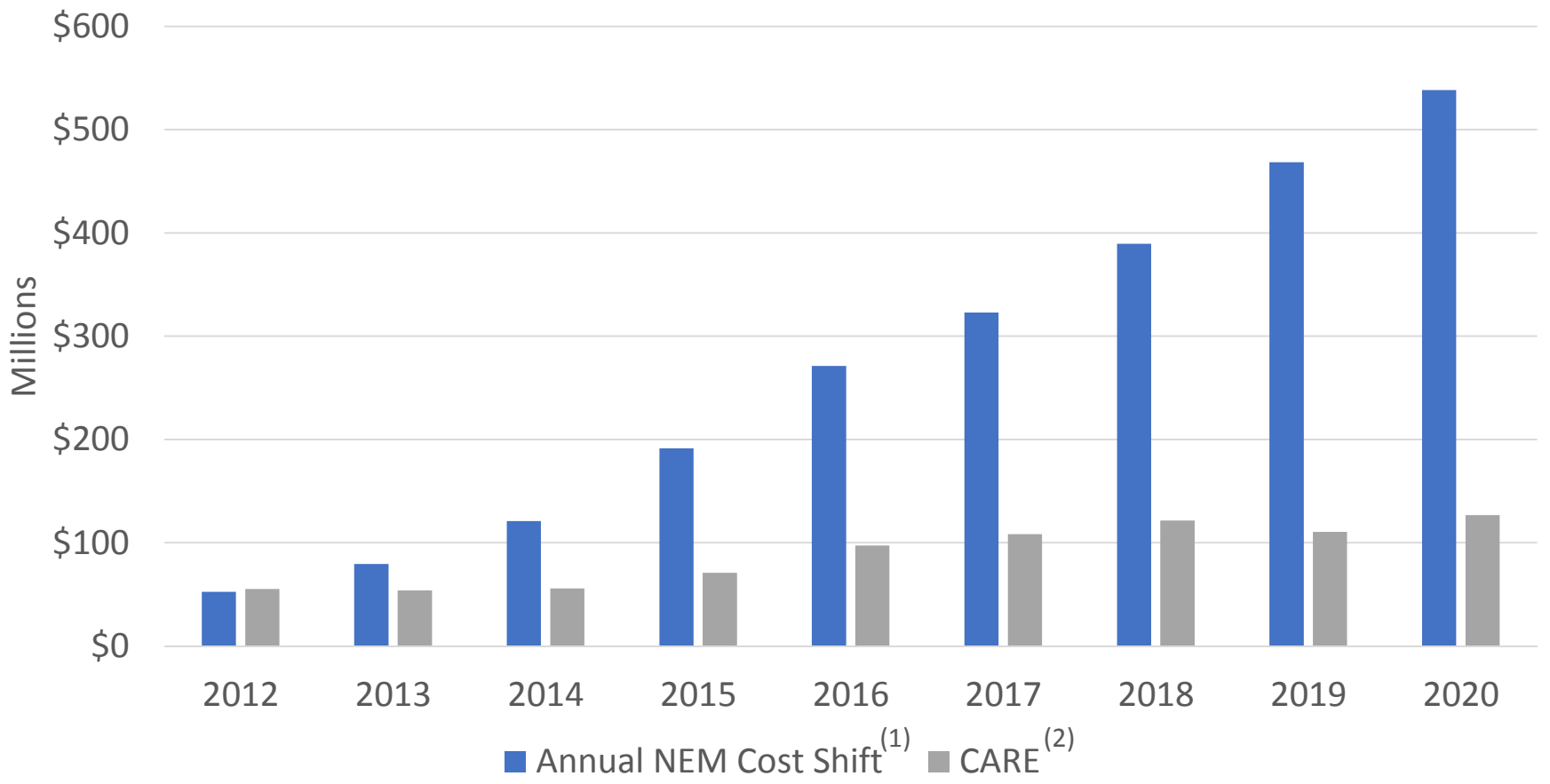
Impact of Sales Decline on System Average Rate



1) System average rates as of January 1 of each respective year.
2) Assumes 2012 authorized sales to calculate illustrative rates.

Net Energy Metering

NEM cost shift is currently ~4x the CARE program in SDG&E's service territory

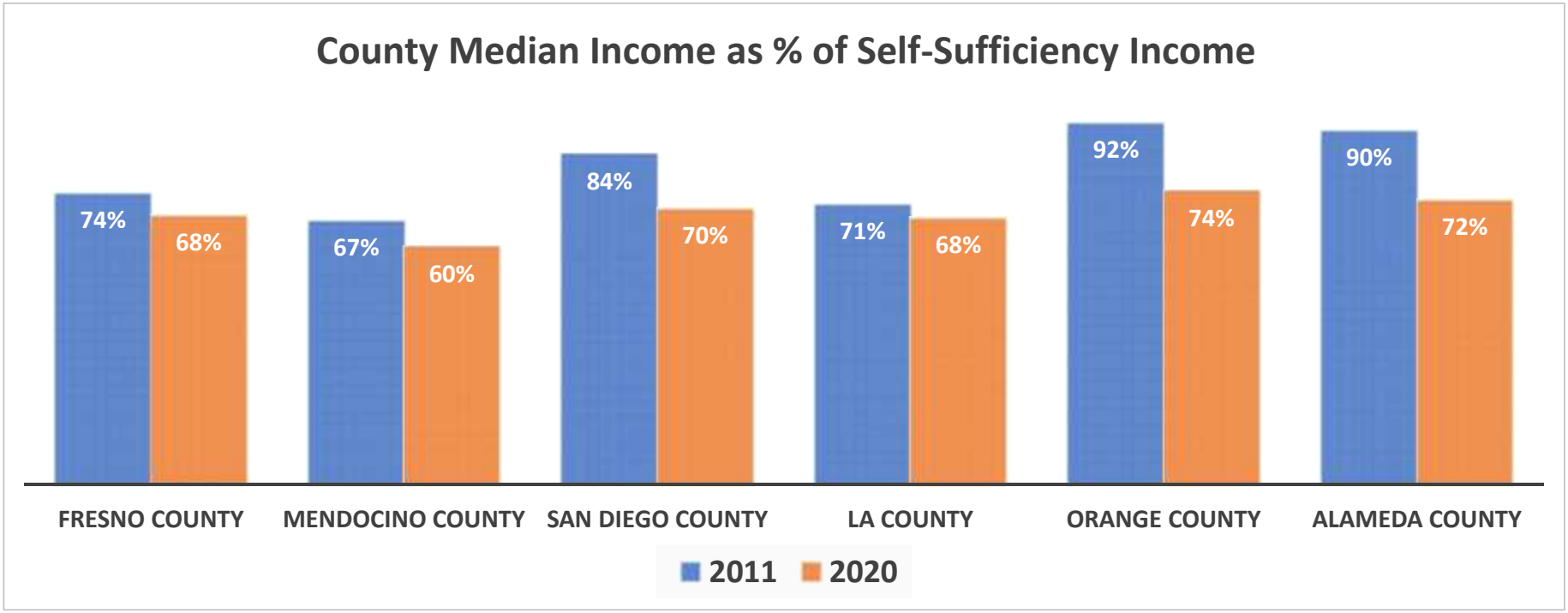


1) Annual NEM cost shift based on rates effective 10/1/2020.
2) Represents program costs and customer discounts associated with electric service. 2020 CARE costs are estimated using the last twelve months of public data (December 2019 – November 2020).

CPUC Rate En Banc Presentation

February 24, 2021

Ratepayers' Disposable Income is Shrinking



Sources: Income Sufficiency from Insight Center Family Needs Calculator based on four-person household (two adult, one infant, one preschooler). 2019 (most recent year available) CA County Level Median Income from Data Commons: https://datacommons.org

Three Principles/Actions To Improve Rate Affordability

1. **Affordability must directly inform utility revenue requests.**
   - Apply the findings and methodology of Affordability Rulemaking (R.18-07-006) to current and upcoming revenue requests
   - Require IOUs to submit an alternative, CPI-constrained revenue proposal to reduce “anchor bias” in rate cases
   - Use Risk Spend Efficiency data to transparently prioritize the most cost-effective safety spending

Principles/Actions To Improve Rate Affordability (cont.)

2. **Investment in societal benefits should not create shareholder windfalls at ratepayer's detriment.**
   - Consider CA-state asset ownership and alternative ratemaking structures for climate goal infrastructure
   - Fund customer-side infrastructure on expense rather than capital basis (E.g., EV charging stations)
   - Consider general state funding of societal benefits as less regressive than ratepayer funding

Principles/Actions To Improve Rate Affordability (cont.)

3. **Diverse investment should be encouraged to reduce pressure on rates.**
   - Favor non-utility ownership for behind-the-meter grid enhancements (E.g., battery storage)
   - Look for opportunities to leverage sources of funding other than ratepayer dollars

Economic Impacts of Ratepayer Investments in Wildfire Mitigation

CPUC En Banc

February 24, 2021

Betony Jones

INCLUSIVE ECONOMICS

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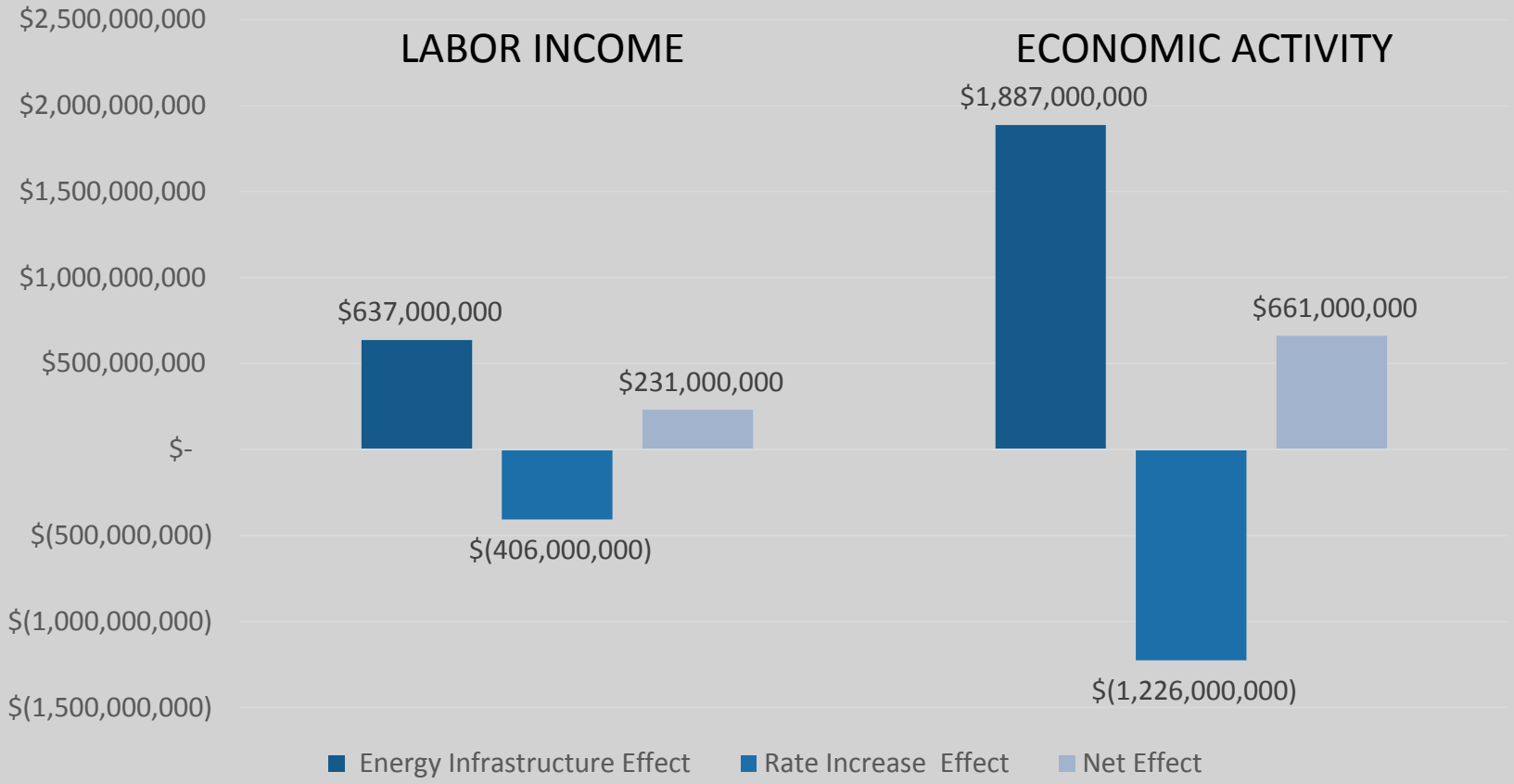
Overview

- Investments in infrastructure and wildfire mitigation activities yields net employment and economic benefits.
- The more equitably we manage energy costs, the greater the overarching benefits to the California economy.
- The IOUs have multiple levers at their disposal to improve energy affordability: rate design, reduce energy use, labor standards

Example: Wildfire Mitigation Investments

- Wildfire mitigation could cost residential ratepayers $10B from 2021-2030.
- The resulting investments will stimulate economic activity and create good jobs for CA workers, yielding net economic benefits for the state.
- Shifting $10B from CA households to the proposed wildfire mitigation activities would yield net impacts of 22,000 jobs, $2.3B in labor income, and $6.6B in increased economic activity.
- If households earning less than $100k annually were shielded from rate increases, the net benefits would be even greater (36,000 jobs, $3.2B in labor income, and $8.8B in increased economic activity)

Economic Effects of $1B Household Energy Bill Increases for Wildfire Mitigation



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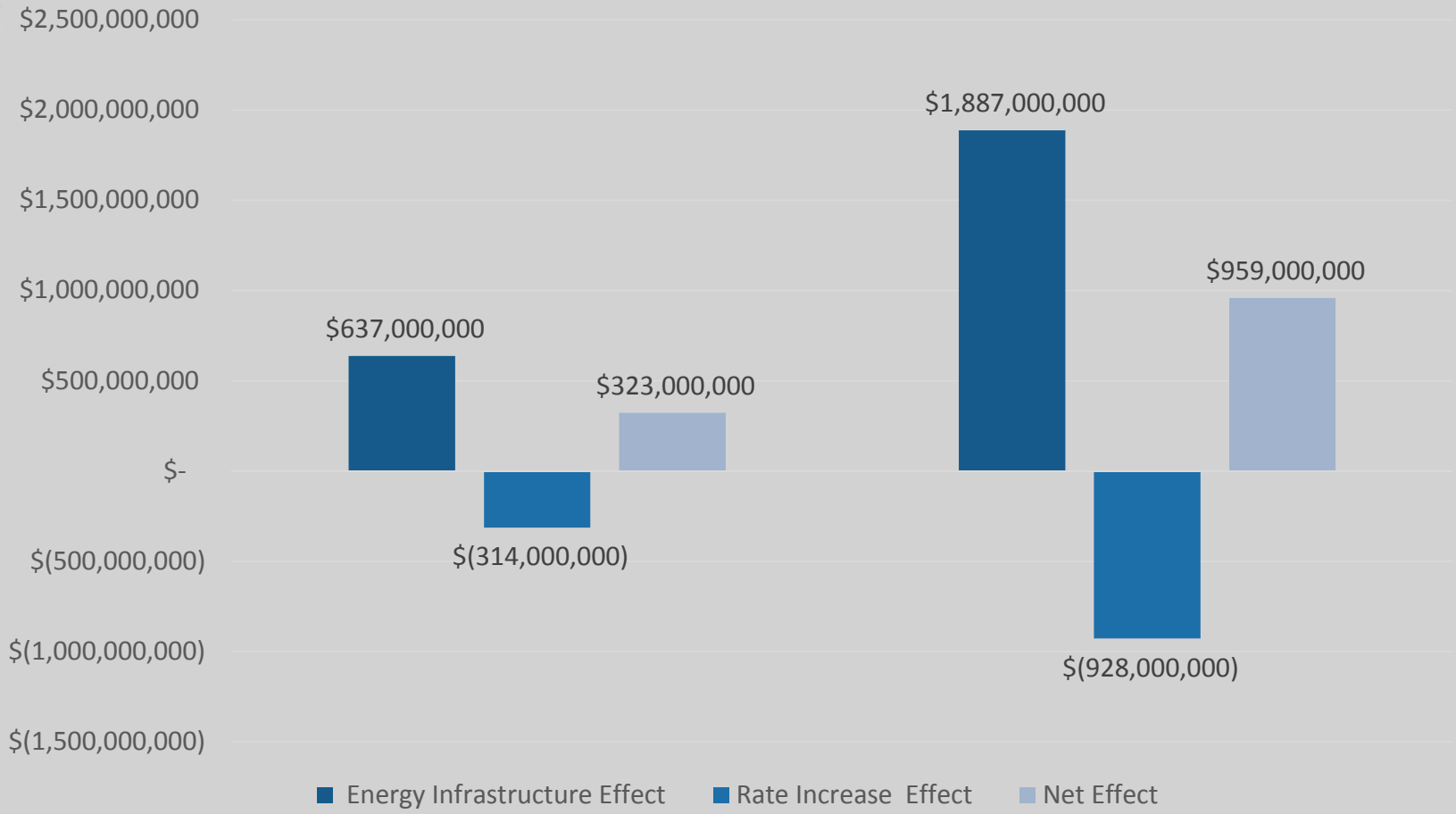
Economic Effects of $1B Energy Bill Increases Limited to Households with Incomes >$100k



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Affordability Considerations

1 in 3 Californians qualify for CARE rates, and even more qualify for federal rate assistance

- Energy affordability has three components:
  - amount of energy consumed
  - rates charged
  - household income available for energy purchases
- When the investments create good-paying, family sustaining, in-state jobs, they increase household income, moving people up the economic ladder and reducing the number of households requiring bill assistance
- Adoption of labor standards, wage standards, diversity and inclusion standards can ensure that all possible levers are being utilized to improve energy affordability.

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February 24, 2021

www.seia.org

2021 Electric Costs and Rates En Banc

Rick Umoff

Senior Director and Counsel

Solar Energy Industries Association

2021 Electric Costs and Rates En Banc

Net Metering

- **NEM should evolve to reflect changing needs on the grid. As the state undertakes NEM reform, it should consider –**
  - Ensuring the sustainable growth of distributed solar per AB 327
  - Continuing to align NEM with the state's GHG and reliability goals as the electric grid changes, such as leveraging NEM to drive adoption of BTM storage
  - Expanding access to the benefits of distributed solar and storage to more low-income customers, disadvantaged communities, and renters
  - Implementing policy changes that are gradual and predictable to attract the private capital needed to meet CA's climate and grid challenges cost-effectively

- **NEM has been foundational to the growth of distributed solar in California, helping the state reach over 1 million solar systems deployed**
  - NEM has been a key policy in creating 75,000 solar jobs in California
  - NEM has been instrumental in attracting billions of dollars in private investment to California's economy
  - NEM has allowed thousands of California ratepayers to take control of their energy bills and help the state meet its clean energy goals

2021 Electric Costs and Rates En Banc

Strategies for Leveraging Distributed Solar and Storage

- **Supporting Electrification and DER Deployment**
  - Onsite solar provides abundant, low-cost, renewable off-peak power at point of use that can be used to charge EVs, power heat pump water heaters, and fill storage to serve peak demands
  - Properly designed rates can encourage beneficial use of onsite solar and storage to support electrification
- **Reducing Grid Costs and Enhancing Resilience**
  - Dynamic rates, DER aggregation, and increasing the role of DERs as a capacity resource can help California meet its reliability needs more cost-effectively
  - Distributed solar and storage located near load helps to avoid costly T&D upgrades
  - Solar and storage enables customers to become more resilient in the face of PSPS and other outages related to aging grid infrastructure and climate extremes
- **Meeting State Climate Goals**
  - Customers that invest in solar and storage bring private capital that supports California's clean energy transition
  - DERs provide a unique land use benefit that allows California to balance its clean energy targets with its land conservation objectives

2021 Electric Costs and Rates En Banc

Using Distributed Solar and Storage to Reduce System Peaks