# My House, **My Choice**

**Eugene Mitchell** April 30, 2019







# Gas is Good!

#### Attacks on natural gas increasing:

- AB 3001 (Bonta, 2018) Would have required new buildings after 2022 be built "electric-ready", with panel capacity to allow fuel-switching to electric heating; directed the CEC to include the full lifecycle costs of fossil fuels in setting energy and GHG standards for buildings; and directed the CPUC to update its "three-prong test" rule for fuel substitution incentive programs to reflect the state's current grid policies and climate goals. *Bill died.*
- AB 3232 (Friedman, 2018) Would require the CEC to include, beginning with the 2021 Integrated Energy Policy Report, a report on the emissions of GHGs associated with the supply of energy to residential and commercial buildings. Before amended, the bill required recommendations and implementation plans to change all buildings to be 100% electric. Signed by Governor.
- AB 1257 (Bocanegra, 2013) Requires the CEC to evaluate how natural gas can assist California in reaching its renewable energy, energy use, and emission reduction goals, and requires the CEC to identify strategies to maximize the benefits of natural gas as an energy source. Signed by Governor.

#### CCAs are about customer choice; natural gas should be as well.





## **Phase 1 Results**

#### Phase 1 Summary (Existing Single-Family Homes)

- **Cost for Electric Appliances and Upgrades:** \$2,674 installed cost increase for electric appliances; \$4,671 for higher capacity panel and branch circuit and utility service connection fee; total incremental costs of \$7,345.
- Annual Utility Bill Increase: \$123 to \$388 per year for existing homes with baseline natural gas appliances; 11-19% increase depending on home location.
- Homeowner Cost Comparison: If the upgrade costs are spread over 15 years and combined with utility bill increase, the result is a \$613 to \$877 annual cost increase; 1-2% of median household income for California customers, and an annual cost increase of \$4.3 to \$6.1 billion across 7 million California single-family homes.
- **GHG Emissions Savings**: Appliance electrification reduces an existing home's total GHG emissions by 35-39% in 2020. These savings account for approximately 2% of California statewide GHG emissions.





### **Cost for Electric Appliances and Upgrades**

Appliance Type	Natural Gas Appliance Cost	Electric Appliance Cost	Cost Difference \$3,009	
Water Heating	\$1,520	\$4,529		
Space Heating	\$8,586	\$8,560	\$(26)	
Cooking	\$990	\$740	\$(250)	
Clothes Dryer	\$593	\$534	\$(59)	
All Appliances	\$11,689	\$14,363	\$2,674	
Electrical Upgrade	N/A	\$4,671	\$4,671	
Total Cost	\$11,689	\$19,034	\$7,345	

Source: Appliance costs estimated from SoCalGas data for 2016 and increased by 5% to reflect 2020 values. Electrical upgrade cost from TRC, Palo Alto Electrification Final Report, City of Palo Alto, 2016. Link

Notes: Combined purchase, installation, and upgrade costs, including contractor overhead, profit, permit fees, and other factors that homeowners would experience with professional installation. Electrician cost for HPWH removed to avoid double counting upgrade cost.





### **Phasing Out NG in Homes and Businesses is Different**

- Only 22% favor phasing out the use of natural gas; just 7% strongly favor
- Nearly 60% are in the opposition camp
  - The intensity is on the opposition's side
- A sizable one-fifth are unsure

"Some people think homes and businesses should no longer be allowed to use natural gas and have proposed phasing it out in California. Others think this is a bad idea. Do you favor or oppose phasing out the use of natural gas?"

Oppose, strongly	Oppose, somewhat	Unsure	Favor, somewhat	Favor, strongly	
37%		22%	19%	15%	7%

#### Initial Test of the Natural Gas Phase-out

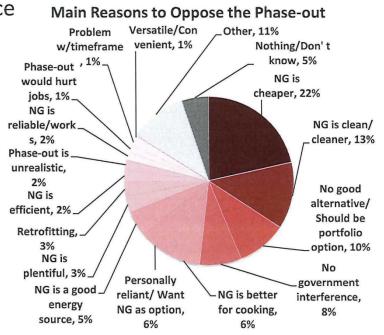




### Much of the Opposition Rationale Centers on "Cost"

- 22% are against the phase-out because natural gas is "cheaper"
- Another 13% focus on the idea that natural gas is "clean" or "cleaner"
- 2 types of "option" or "choice" rationales for supporters
  - 10% say lacking good alternatives, NG should be part of society's portfolio
  - That's different from the 6% who focus on personal reliance on natural gas
- Related: problems w/government interference
- NG is better for cooking
- NG is a good energy source
- NG is plentiful
- Retrofitting, unrealistic phase-out plan and reliability are all very minor reasons.





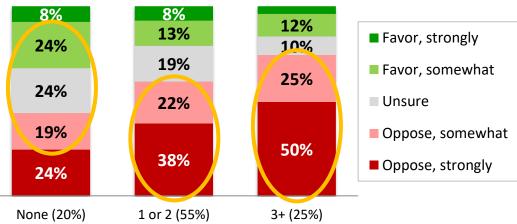




### **More Natural Gas Appliances = More Opposition**

- Customers with 3+ NG appliances strongly disagree with the phase-out
- Customers with one or two gas appliances only oppose at a 60% clip
- Those with no gas appliances are split with mushy opinions
- It's more complex than dual-use vs. electric-only households
  - The deciding factor is the *amount* of reliance on gas
- Dual-users who were asked how it would feel to lose access to NG oppose the phase-out more often those who weren't asked
- Suggests "priming" natural gas customers to think of the loss spurs opposition

Initial Test of Natural Gas Phase-out by Amount of Gas Appliances in the Home



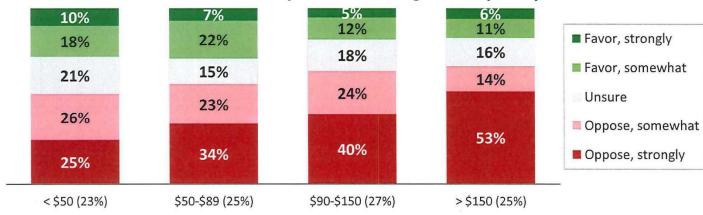
• The same thing doesn't happen with people in electric-only homes.





# **Higher Utility Bills Lead to Opposition**

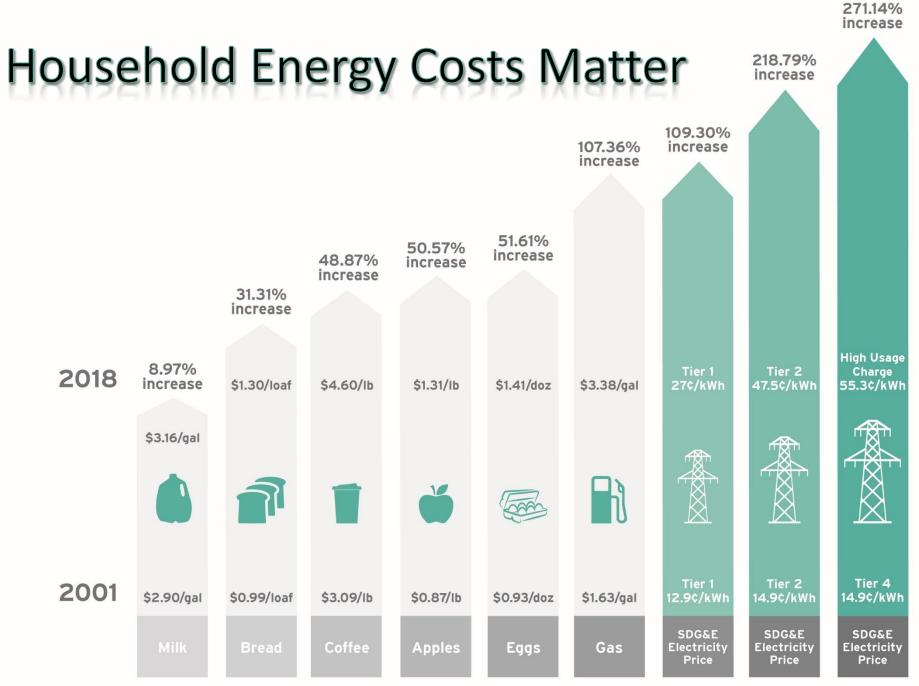
- Distaste for a phase-out is much milder when bills are < \$50 per month
- But opposition mounts with each more expensive rung on the ladder
- Strong opposition to the phase-out boils over in homes with bills > \$150.



Initial Test of Natural Gas Phase-out by Estimated Average Monthly Utility Bill







\*Source: U.S. Department of Labor

#### **Natural Gas – Affordable Energy Choice**





