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# Building Electrification

Scott Blunk  
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Powering forward.  
Together.





# Electrification at SMUD

CHEAPER | SAFER | HEALTHIER | BETTER



**Goal → Support 100% Electrification of Low-income by 2040, all buildings 2045**

## 2018 - Current

Launched Program Offerings  
in All Sectors

Carbon-based metric for  
efficiency portfolio created

2,500+ Equivalent electric  
home conversions

18% All-electric buildings  
starting in 2018

## 2021 - 2030

New construction codes

Full-service / turnkey  
offerings

Financing options +  
infrastructure for customers

35% All-electric buildings by  
2030

## 2030 - 2040

All new appliance and  
vehicle sales electric by  
~2030

Support 100% of low-income  
customers electrified by 2040

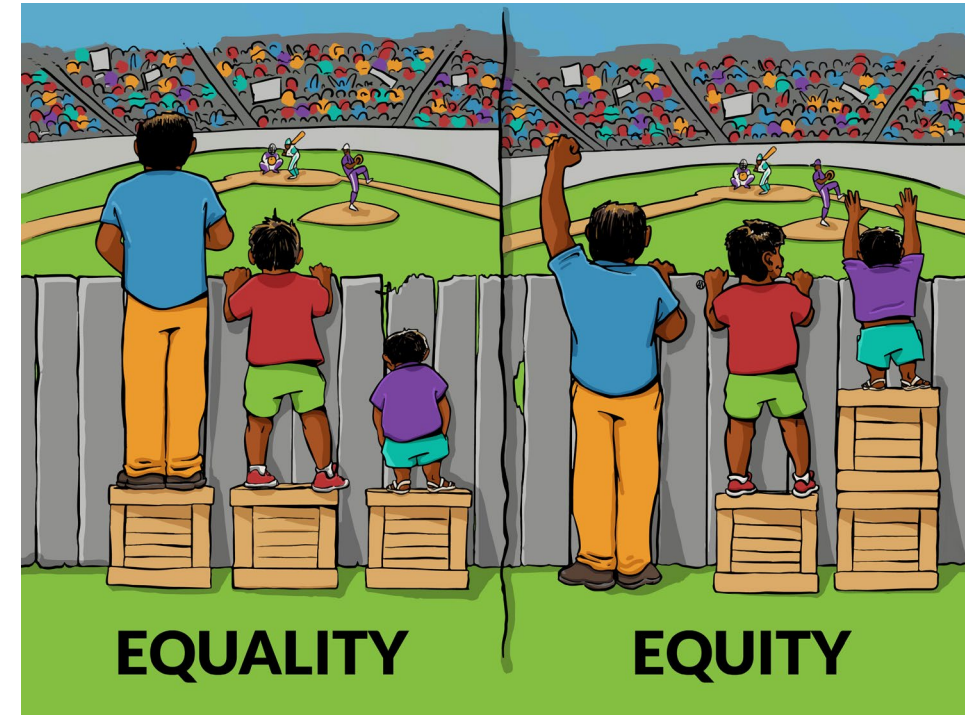
80% All-electric buildings by  
2040

Additional funding must come from external sources to be successful



# Why run incentive programs

- Climate change & customer relations
- Why offer upfront incentives
  - Cover the incremental cost
  - Create market transformation
  - Educate both customer and contractors
- But existing programs are incremental at best
  - We've done these programs for decades  
→ it's what we know
  - And what we know is they are slow moving
  - They focus on equality rather than equity
  - We cannot scale these to reach our goals



# What barriers are we trying to overcome

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- Consumer & contractor preference / knowledge / misinformation
- Incremental cost
- Replacement time / building readiness
  - Barriers: new circuits / panel replacement or subpanels
  - Heat pump incentives don't help → preparation does
    - Electrification readiness programs (TECH, SMUD, etc.)
    - Low amp technology almost available, circuit sharing



# What's happening today

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- What's happening today
  - Upfront incentives
    - SMUD's program is anticipated to reach 3,000 of the approximately 15,000 gas replacements in our territory this year
    - This number is largely unchanged for 3 years
    - Overhead cost per unit \$500-\$700
  - Loans
    - Loans today are, in general, neither equal or equitable
      - GoGreen financing may be an exception

# 0% Loans for all

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- 0% loan program in SMUD territory
  - Possible launch 2023
  - \$1.1B in electrification loans forecasted through 2030
- ~175% of forecasted units possible at the same cost as the existing program
- Equity is the ingredient that makes the program possible
  - Loan loss / guarantee is also required
- TECH incentives are critical to overcome incremental cost



# 0% + TECH Incentives

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- Combining 0% plus TECH incentives
  - Overcome the first cost barrier
  - Equity gets the loans to the customers most in need
  - Loan loss / loan guarantee keeps the cost down
  - Loans will cover heat pump water and space heating as well as panel upgrades
  - Does not address electrification readiness appropriately





# Thank you

**Scott Blunk**

[scott.blunk@smud.org](mailto:scott.blunk@smud.org)

(916) 826-9369

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