

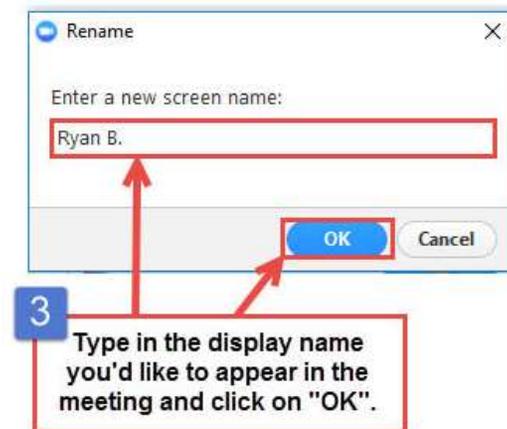
Equity, Energy & Multifamily Housing

MULTIFAMILY HOME ENERGY RETROFIT COORDINATING
COMMITTEE (MF-HERCC)

OCTOBER 27 & 28 2020

Welcome – Who's in the room?

- Following the steps below, change your name in meeting to “Name – Organization”, e.g. “Ben Cooper – StopWaste”



Agenda Day 1 (Tuesday Oct 27, 9AM-12)

➤ **Panel on Equity and Energy**

- Historical Inequities in Housing (Matt Van Des Sluis, BARHII)
- Community Engagement & Program Delivery (Eric Arnold, Georgia Power Company)

➤ **Facilitated Breakout Discussions & Survey**

➤ **CPUC Staff presentations**

- Affordability Definitions (Kathleen Yip, CPUC)
- Affordability of Utility Service (Ankit Jain, CPUC)

Ground Rules

- **Mute when not talking, i.e. when not in breakout rooms or group discussion**
- **Q&A questions will be fielded through the chat, please send to “everyone”**
- **Survey responses are anonymous**
- **If you’re having technical issues, send a private chat to “Chris Hunter - StopWaste”**
- **R-E-S-P-E-C-T**
 - “Step up and step back” to allow everyone ample time to share
- **Discussions and breakouts are a safe space to express a diversity of opinions**

STOPWASTE MF-HERCC Coordination Team
at home • at work • at school

Heather Larson



Candis Mary-Dauphin



Ben Cooper



Presentations: Housing Equity & Energy

HISTORICAL INEQUITIES IN HOUSING

COMMUNITY ENGAGEMENT AND PROGRAM DELIVERY

Keynote Speakers

Matt Van Der Sluis, BARHII



Eric Arnold, Georgia Power





**HOUSING, ENERGY EFFICIENCY, AND
HEALTH EQUITY IN THE BAY AREA**

Our Mission

A photograph of the Golden Gate Bridge in San Francisco, California. The bridge's iconic red-orange towers and suspension cables are visible against a clear blue sky with scattered white clouds. The bridge spans across a body of water, with rolling green hills in the background.

It is our mission to transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches that create healthy communities.

Our Power



The coalition of the Bay Area's public health departments



200+ strong community network

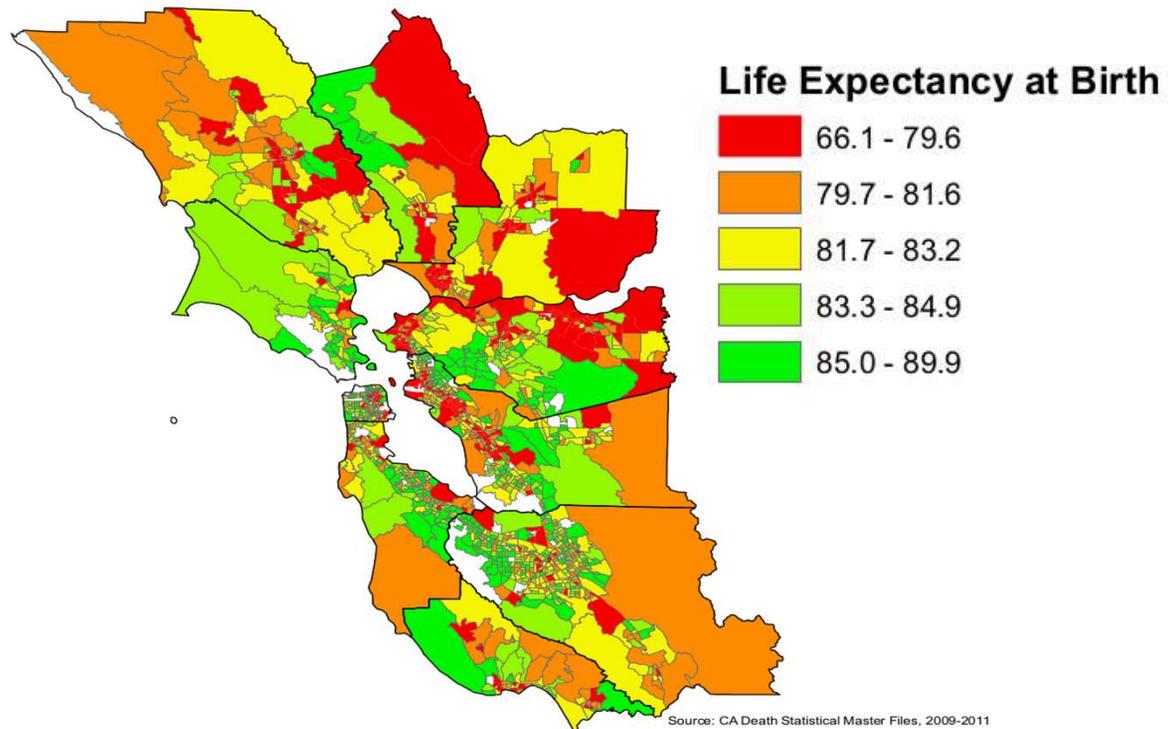


Health Equity. Economic Opportunity. Racial Justice.

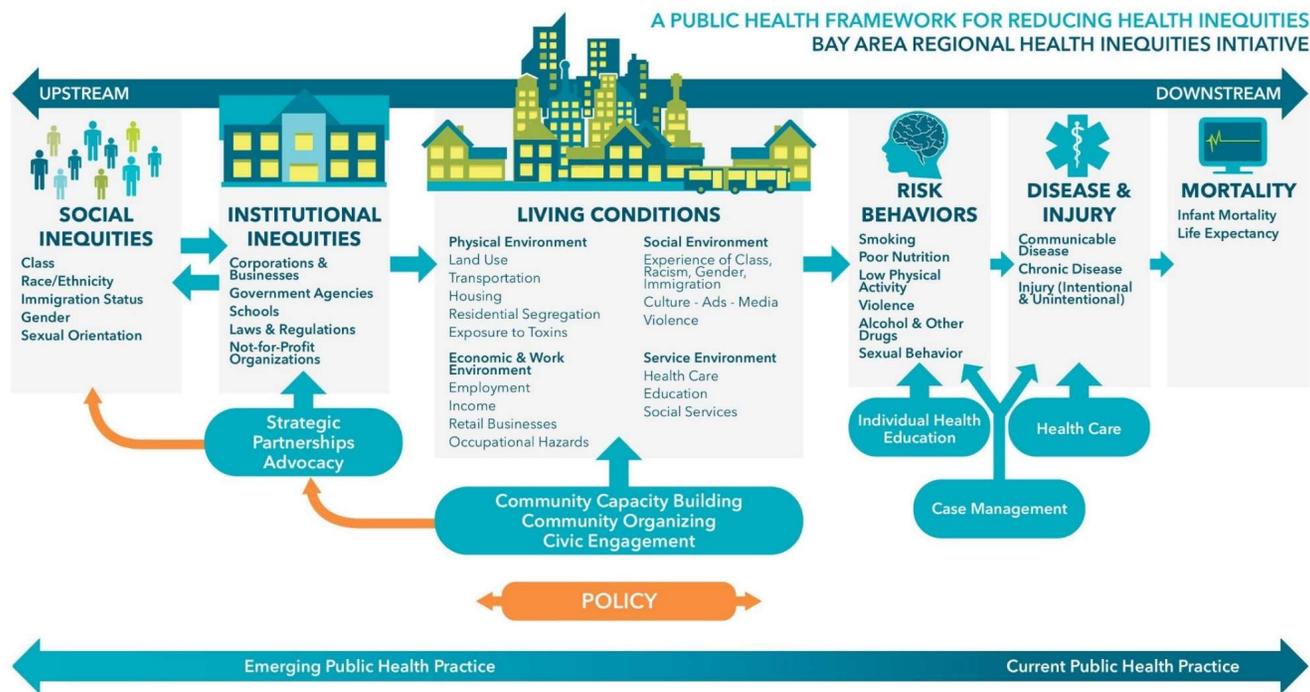
Our Region



Our Region



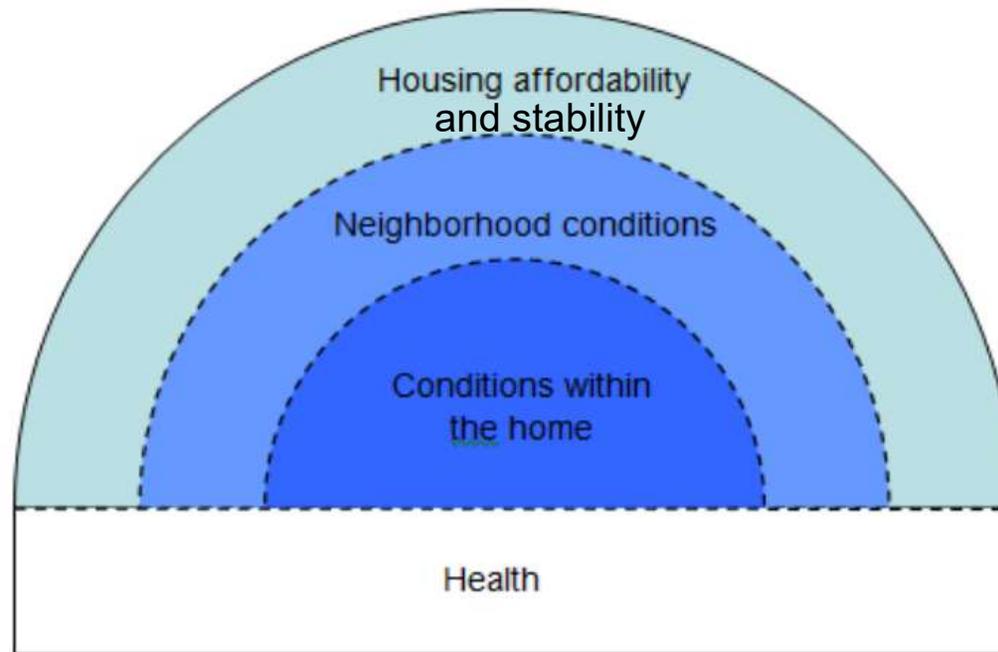
Our Framework



Our Framework

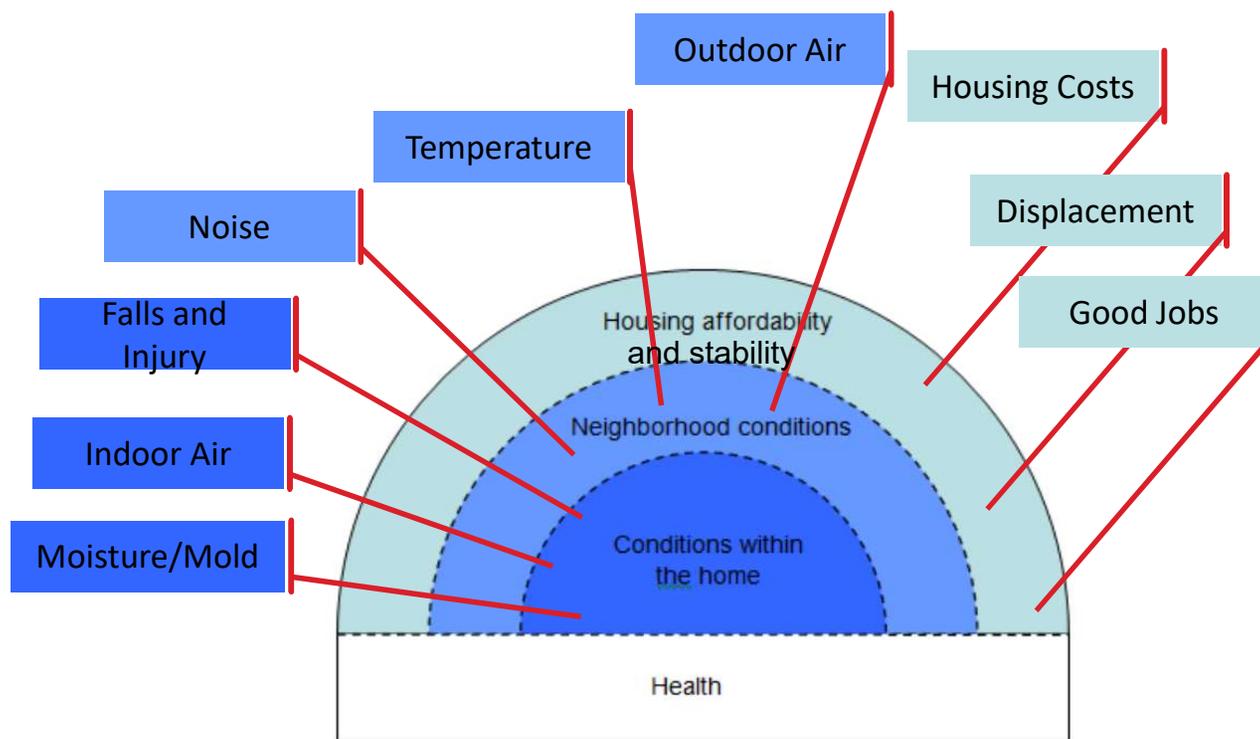


Housing and Health Equity



Credit: Robert Wood Johnson

Housing, Energy Efficiency and Health



Credit: Robert Wood Johnson

Displacement in the Bay Area



COUNTY	AT RISK	ONGOING OR ADVANCED
Alameda	35%	36%
Contra Costa	24%	18%
Marin	22%	25%
Napa	28%	28%
Sacramento	35%	23%
San Francisco	35%	47%
San Joaquin	36%	24%
San Mateo	27%	38%
Santa Clara	22%	37%
Santa Cruz	33%	31%
Solano	18%	16%
Sonoma	20%	24%
Yolo	27%	22%
Bay Area Total	29%	31%

Evictions in the Bay Area



Image Credit: The Concord Pavilion

Racial Equity and Housing

Issue	White	Black
Slavery	Could own houses and other property, profit from slavery	Considered property
GI Bill & Redlining	Federal government helped finance suburban homes	Federal government wouldn't loan in Black neighborhoods
White Flight & Exclusionary Development	Access to public and private investments	Lack of access to high-opportunity communities
Housing Discrimination & Foreclosure	Not target of discrimination, often access to good loans	Still face discrimination, steered to subprime loans, one of biggest loss of wealth since slavery
Displacement & Gentrification	Moving in	Being pushed out, facing fracturing community networks
Policing & Incarceration	Not targeted due to race	Racially profiled, discriminatory sentences, mass incarceration, denied housing upon re-entry
COVID-19 Policy Responses	More likely to keep work, avoid eviction and exposure, own in less risky housing markets	More likely to lose employment, higher risk of eviction and exposure, own in riskier markets

Homelessness and Race

We treat homelessness as an individual and behavioral issue for intervention...

“The impact of institutional and structural racism in education, criminal justice, housing, employment, health care, and access to opportunities cannot be denied: homelessness is a by-product of racism in America.”

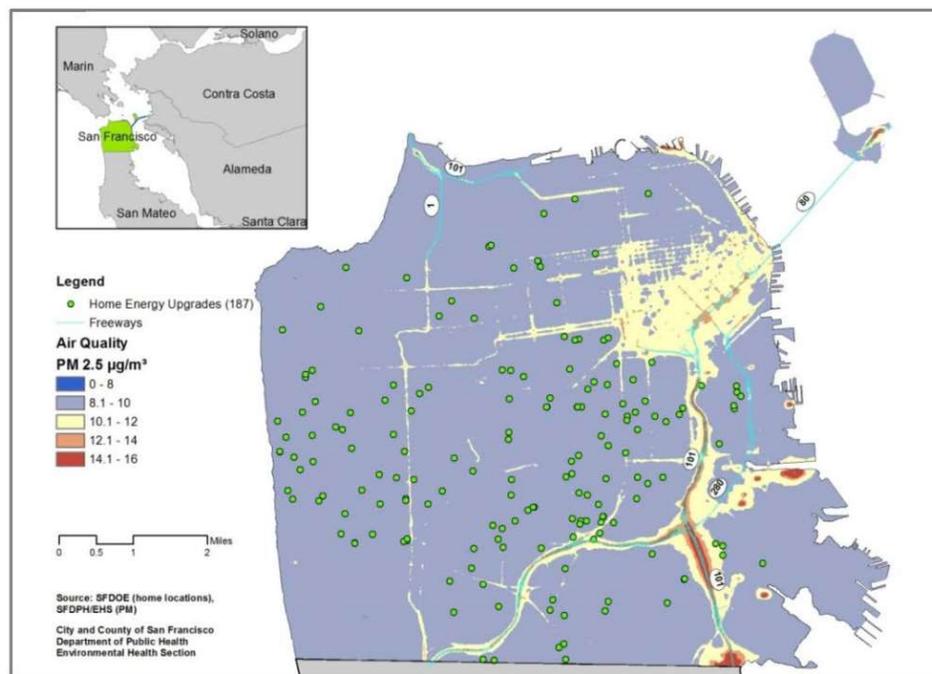
*Los Angeles Homeless Services Authority: Report and Recommendations
of the Ad Hoc Committee on Black People Experiencing Homelessness*

Considerations for Energy Efficiency

1. **Displacement:** Protections from losing home due to increased home value
2. **Economics:** Improvements that financially benefit tenants vs. owners
3. **Health:** Improvements to home health and substandard accommodations
4. **Access:** Removing program participation barriers for low-income people of color (financial, administrative, awareness)
5. **Sector:** Policies that benefit market-rate vs. affordable housing projects
6. **Employment:** Diversity of workforce, pipeline to employment
7. **Power:** Centering impacted people in decisionmaking; supporting equity-oriented CBO infrastructure (funding, contracting, shared planning, etc.)

Alignment with Health Equity Goals

Map 1. SFHIP energy efficiency upgrade locations (187 homes) and average ambient annual PM_{2.5} concentration from all sources ($\mu\text{g}/\text{m}^3$).



http://www.pewtrusts.org/en/~/media/assets/external-sites/health-impact-project/savingenergyimprovinghealth_finalhia.pdf

We're Here to Help

- **Data and Strategy**
 - Health equity conditions
 - Specific, medically vulnerable households
 - Maximizing multiple benefits and avoiding harms
- **Outreach**
 - In client's homes
 - Trusted spokespeople, connectors
 - Building power with community

BARHII Contacts:

Melissa Jones, ED: mjones@barhii.org

Matt Vander Sluis, Senior Impact Manager: mvandersluis@barhii.org



THANK YOU!



Multifamily Experience and Learnings

Eric Arnold
Residential Energy Efficiency Implementation Manager
October 27, 2020



Southern Company



We provide clean, safe, reliable, affordable energy and customized solutions



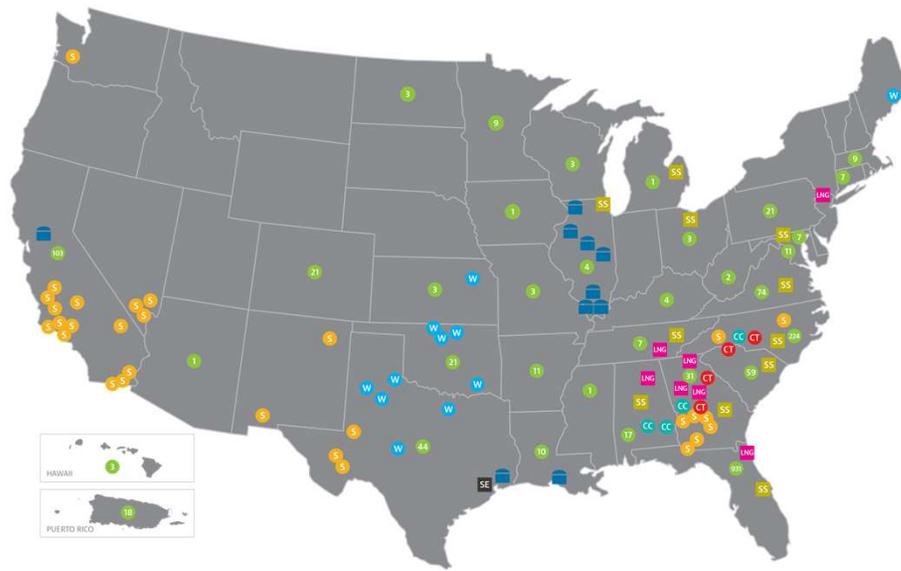
Service territories

- Electric
- Gas



Gas pipelines

- Southern Natural Gas
- Southern Company Gas
- Pipeline projects



- | | | |
|--|---|--|
| <p>Southern Power</p> <ul style="list-style-type: none"> ■ Combined-cycle facility ■ Peaking facility ■ Biomass facility ■ Solar facility ■ Wind facility | <p>Southern Company Gas</p> <ul style="list-style-type: none"> ■ LNG facilities ■ Sequent Energy Management ■ SouthStar ■ Natural gas storage | <p>PowerSecure</p> <ul style="list-style-type: none"> # Owned and managed sites per state |
|--|---|--|

*In November 2018, Southern Power agreed to sell its combined-cycle facility in Mankato, Minnesota.

Capabilities in
50 States

7
Electric & Natural
Gas Utilities

9 Million
Customers

Approximately
29,000
Employees

Approximately
44,000 MW
of Generating Capacity

Multifamily Historical Foundation



Historical

Long History Focused on Electrification

- Dates back to mid-80s
- Sales Executives/Key Account Managers dedicated to MF sector



Ally Networks

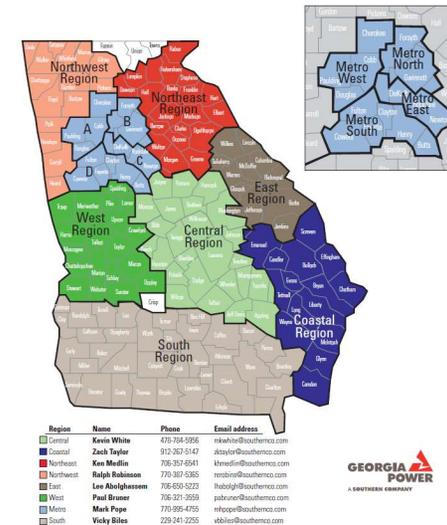
- HVAC Dealers (Conditioned Air Association of GA)
- Plumbing Contractors (PHCC)
- Public Housing Authorities

Association Partnerships/Sponsorships (Stress, length of partnership)

- Atlanta Apartment Association (AAA)
- Georgia Affordable Housing Coalition (GAHC)
- Georgia Housing and Redevelopment Authorities (GARHA)
- Department of Community Affairs (DCA)



Existing Multifamily Contacts



Informed With Data – Define What’s In It For Them

- Properties and End-uses
- Financial Resources and Timing
- Detailed Proposals w/Bundled Services
- Cost Comparisons
- Utility Allowances - HUD



MULTIFAMILY EXISTING

Multifamily Rebate Program

Georgia Power is continuously striving to work to help increase the energy efficiency of our customers' homes and businesses. The Rebate Program is designed to help you convert a property to more efficient heating and cooling and water heating systems. These rebates are not only beneficial to the occupants of the building, but will also benefit you.

We offer rebates to residential owners who convert property systems to more efficient equipment. (The property/tenant must be owned by Georgia Power.)

Multifamily and PHA Renovation Program
(Three or more attached rental dwellings)

- Reduce gas heating systems with an electric heat pump. (14 SEER/2 HSPF)
- Assigned sales executives to assist with system analysis, coordinate efficiency and contractor coordination.
- Rebates – Up to \$925 may be available per apartment. Rebates to paid to property owner.

For specific rebate information or to apply to your account, contact your local Georgia Power representative, or call 1-800-524-3021.

Benefits of Total Electric:

- Energy Efficiency
- Near-Noise Indoor Comfort
- One System Heats and Cools
- Easy Maintenance
- Long-Term Operating Cost Advantage

For more information, please contact your local Georgia Power representative, call 1-800-524-3021, or visit georgiapower.com/multifamily.

*The rebates are only available for existing multifamily units that are currently being converted from gas to electric. The Georgia Power rebate is available with the electric heating system installed within 12 months of the date of the rebate. The rebate amount may vary based on the equipment and the size of the project. Rebates are subject to availability. Rebates are available for the following equipment:

Georgia Power – 2015 Rebate Program

Rebates for conversion:

Heat Pumps:

- \$200 rebate for a 16 SEER Traditional Heat Pump or a 14 SEER Variable Refrigerant Flow (VRF) Inverter Technology conversion*
- \$250 rebate for a 15 SEER conversion**
- \$200 rebate for 13 – 14 SEER conversion**

Water Heating:

- \$200 rebate for Marathon® water heater conversion
- \$200 rebate heat pump water heater conversion
- \$200 rebate for standard electric** (see specific details below)

Rebates for replacement:

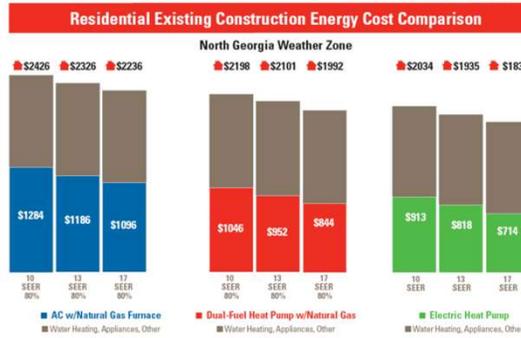
Heat Pumps:

- \$200 rebate for a 16 SEER Traditional Heat Pump or a 14 SEER Variable Refrigerant Flow (VRF) Inverter Technology replacement**
- \$50 rebate for a 15 SEER replacement**

Water Heating:

- \$200 rebate heat pump water heater replacing standard electric water heater (10 gallons and a 2.22)

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2102 Kilwell Drive
Savannah, Georgia 31405
Tel 912.308.2318
Fax 912.308.2308

Mr. John Eady
Allen Apartments
1426 Bell Air Drive
Savannah, Georgia 31415



Dear John,

Thank you for your interest in exploring the many benefits of energy efficient electric end uses. Georgia Power has approved a **Primary Rebate Offering** for Allen Apartments on a per dwelling basis. These options are available for the conversion of gas space heat units to Electric Heat Pumps and gas water heaters to Marathon® Electric Water Heaters on the qualifying property(s) listed below.

The **Primary Rebate Offering** will be paid to you when the installation of the Electric Heat Pumps and/or Marathon® Electric Water Heaters is complete and the permanent electric service is active.

Primary Rebate Offering

Property	Heat Pump Rebate Per Dwelling	Marathon Water Heater Rebate Per Dwelling	Rebates Available Per Dwelling	Total Dwelling Units	Total Rebates Per Property
Allen Apartments	\$200	\$300	\$500	88	\$48,000
Total Rebate Amount Available					\$48,000

The **EarthCents® Home Energy Improvement Program** rebates are in addition to the primary rebate offering based on the individual efficiency improvements completed and will be paid to you when the individual efficiency improvements are complete and the permanent electric service is active.

EarthCents® Home Energy Improvement Program Rebates
(Some restrictions may apply, please consult with Georgia Power for program details.)

Individual Improvements	Rebate Per Dwelling (5% of Cost Up to \$500 Maximum)	Total Dwelling Units	Rebates Available
Thermostat Conversion	\$50	88	\$4,800
High Efficiency Heat Pump	\$50	88	\$4,800
Airtight Insulation Improvement	\$150	88	\$14,700
Air Sealing (Windows / Doors)	\$200	88	\$19,600
Improved Duct Sealing	\$200	88	\$19,600
Knee Wall Insulation Improvement	\$75	88	\$7,350

The maximum potential EarthCents® Rebate Amount Available is \$358 per unit for Individual Improvements. Any combination of the Individual Improvements listed above shall not exceed \$34,380.

_____ Date _____

_____ from the signing date of this proposal for adequate time to complete the renovation Home Energy Improvement rebates are _____



GEORGIA POWER Proposal Offer

For



mercyHOUSING

Live in Hope



Rose of Sharon
322 E. Taylor Street
Savannah, GA 31401

April 17, 2015

Provided by:
Ted Jones – Area Sales Executive
Eric Arnold – Residential Segment Manager





Resources/Testimonials

- Dedicated Resources
- Celebration Highlights
- Contractor Only Portals
- Tenant Engagement

Energy efficiency in the community.
 Helping our neighbors save money and energy, one community at a time.



ENERGY EFFICIENCY
Residential Program Contractors

Georgia Power

COVID-19 Residential Business Community Company Shop

Serious savings for your multi-unit property.

Get Started

Residential / Save Money & Energy / Programs | For Your Home / Home Energy Efficiency Programs

Thank you for your interest in the Georgia Power Residential Energy Efficiency Programs. As a participating Program Contractor, you have the opportunity to grow and diversify your business, co-market with Georgia Power and offer your customers rebates from Georgia Power in order to increase the comfort and energy efficiency of their home.

<p>Become a Program Contractor</p> <p>Prior to applying, prepare yourself for success by reviewing our onboarding checklists for the Home Energy Improvement Program and the Home Energy Efficiency Assistance Program.</p> <p>Apply Now</p>	<p>Program Details</p> <p>Visit the web page for the Home Energy Improvement Program for more information about the types of measures you may install for your customer projects.</p> <p>Apply Now</p>	<p>Frequently Asked Questions</p> <p>We've collected the most frequently asked questions from your peers and created one place where you can get answers to your questions.</p> <p>Read FAQs</p>
<p>Rebate Application</p> <p>Submit and check the status of your rebate applications via the links below.</p> <p>Individual Improvements Whole House Single Family Whole House Multifamily</p>	<p>Contact Us</p> <p>Contact us for information about our programs, becoming a Program Contractor or applying for rebates. Email: ResContractor@geopower.com</p>	<p>Program Resources</p> <p>Find marketing materials and other helpful information that you can use as a Program Contractor in our resource portal. Resource Portal (Coming Soon!)</p>

Multifamily Home Energy Improvement Program

Attract and retain tenants with rebate-earning

The Home Energy Improvement Program empowers residential property owners to implement multifamily energy efficiency measures. Georgia Power awards rebates for installing qualifying energy-saving upgrades. This keeps bills down, improves renter comfort and increases renter retention.

HOUSING CONNECTIONS

Your source for news and energy efficiency information from Georgia Power.

FALL 2009

GEORGIA POWER AND BRUNSWICK HOUSING AUTHORITY
 Partnering to better the community

Over the past several years, Georgia Power has worked with the Brunswick Housing Authority (BHA) to upgrade their properties to electric heat pumps and water heaters, making their housing some of the most energy efficient available.

As part of its efforts, the BHA assists 500 families, single-person households and elderly/handicapped families through the Public Housing program.

In preparation to serve these customers better, the Housing Authority upgraded electric panels and meter bases while Georgia Power also upgraded overhead transformers. Both efforts in Georgia Power areas will assist in the effort.

"We were able to use water heaters and heat pumps that will better serve the residents' needs, while being more energy efficient," said Taylor.

"That helps the residents as well as the Housing Authority." Georgia Power also provided a rebate for converting each water heater from gas to electric, helping make the project possible for the BHA.

"We are grateful to Georgia Power for the rebates we received, especially regarding the conversion of the

Welcome to HOUSING CONNECTIONS

Keeping costs under control is vital to any business, and we know that property management is no different. That's why Georgia Power would like to let you know about the many options we offer for cost management as you plan renovations, upgrades or routine maintenance for your properties.

If your property is served by Georgia Power, you may qualify for rebates that can lower a residence's energy costs from a gas furnace to an electric heat pump. Your decision will pay off again when your tenants find their energy costs are lower and are reflected in a single monthly bill. Also, a more affordable property could mean higher occupancy and a reduction in costs associated with tenant turnover.

Here's what you can expect:

Single Family (three-family houses or duplex)

- \$200 rebate in the energy property owner or HVAC installer for converting gas space heat to a 15 SEER or higher electric heat pump
- \$1000 LSE rebate to the property owner for converting a gas water heater to a

continued on page 2

Utility As A Resource

- Certified Resource Centers
- Technical Training - Maintenance Staff
- On-site Property Visits
- Equipment Analysis
- Certified BPI Test Center



GET PLUGGED IN



HVAC Training Center
"One of a kind" is a phrase often used to describe Alabama Power's HVAC Training Center. Located in Jasper, Alabama, the state-of-the-art facility has provided training, professional development and continuing education to over 38,000+ participants from 45 states and three countries since 1986. In 2017, Alabama Power and Beville State Community College formed a partnership to help provide workforce development and economic growth for Alabama. 52 industry partners have



Demand-side Working Group (DSMWG)

- Led by GA PSC Staff
- Quarterly Meetings
- Representation from Community/Consumer Advocacy
- Heavy Focus on Income-qualified Customers
- Input on Future Programs



Research Drivers





Research Drivers/Learnings

Drivers

- Understand customer journeys to drive customer satisfaction
- Customer knowledge/perception of programs
- Ways to enhance customer participation across customer segments
- Move from a macro to micro strategy with programs
- Understand equity/energy burden as related to program design

High-level Learnings/Defining Equity – Results from Illume Studies

- People make decisions about energy efficiency within the context of how they understand their home and the people in it
- Gender dynamics, family relationships, personal values, and changing life stages all impact the way people orient themselves to their home, and consequently their receptivity to energy efficiency programs and upgrades



Equity Investment

Georgia Power

- On-going Energy Burden committee with City of Atlanta
- Heavily involved with faith communities via Corporate Relations/Community Development
- Internal partnerships (Energy Assistance Team, Regional, Area & Local Managers)

Looking Forward

- See color and diversity in programs and contractor networks
- Actively looking for Black, Hispanic and Asian contractors
- Making sure messaging reflects diversity of household values and traditions
- How can we play a better role in workforce development?
- Ease energy burden by training to serve their own communities – Economic Development

Opportunities

- Build ability to pivot quickly with emerging technologies/ideas related to equity research/findings
- More pilot programs in multifamily – Apply affordable Smart Home technologies
- Build strategy for a solution that's sustainable and brings value
 - MF pre-owned Electric Vehicle programs – charger infrastructure
 - Answer the questions: “Will It Work” and “Is it sustainable?”
 - Increase collaboration with MF property owners/management companies

Income Qualified Programs

Innovation to Drive Equity





Home Energy Efficiency Assistance Program

Program Details



- Assists income-qualified residential customers with home energy improvements
- Provides up to \$3,750 in funding per residence for qualified program participants

Participants



- Georgia Power customer living in single family or multifamily residence
- Household income is 200% or less of current U.S. Federal Poverty Guidelines

Community Support



- To help increase the number of people that can be served by this program, members of the community can donate funds (double) that will be added to the funding provided by Georgia Power

Eligible Improvements



- Air Sealing
- Attic Insulation
- Duct Sealing
- LED Lighting
- HVAC Repair
- Water Heater Jackets
- Smart Thermostats
- Pipe Wrap Insulation



Residential Investment for Saving Energy (RISE) Pilot

Through the RISE Pilot, Georgia Power provides support to customers and communities in need by investing in the upfront costs and installation of approved energy efficiency improvements. The investment for the efficiency improvements is recovered over time through a premise level tariff and shared-savings model.

Program Details



- Average improvement amount: ~ \$7,500 per home
- **Maximum repayment period: 10 years**
- Shared savings: a portion of the customer's electric savings will go towards repayment of the investment made by Georgia Power.

500 Selected Participants



- 250 income qualified participants from **Atlanta** (25 multi-family)
- 250 income qualified participants from **Athens** (25 multi-family)

Eligible Improvements



- Air Sealing
- Attic Insulation
- Duct Sealing
- LED Lighting
- HVAC Repair/Replacement
- Water Heater Jackets
- Smart Thermostats
- Pipe Wrap Insulation

Questions

Eric L. Arnold
elarnold@southernco.com



Q&A

PLEASE WRITE SUCCINCT QUESTIONS IN THE CHAT TO
“EVERYONE”

Equity: What's getting in the way?

WRITE 1-2 WORD RESPONSE IN THE CHAT TO "EVERYONE"

Breakout Discussions

➤ **Break 10:20-10:30**

➤ **At 10:30, you will be randomly assigned to a facilitated breakout group to discuss the following questions:**

- What are the signs of racial inequities in the efficiency sector?
- How can future programs better serve basic human needs of providing shelter, health, community, safety, sustenance?
- Who do we need to listen to and how?

Survey - Reflections on Discussion

CLICK LINK IN CHAT

CPUC Staff Presentations

OVERVIEW OF CPUC EQUITY DEFINITIONS & DATA
ASSESSING THE AFFORDABILITY OF UTILITY SERVICE

CPUC Presenters

Kathleen Yip



Ankit Jain



EQUITY RELATED definitions and data at the CPUC

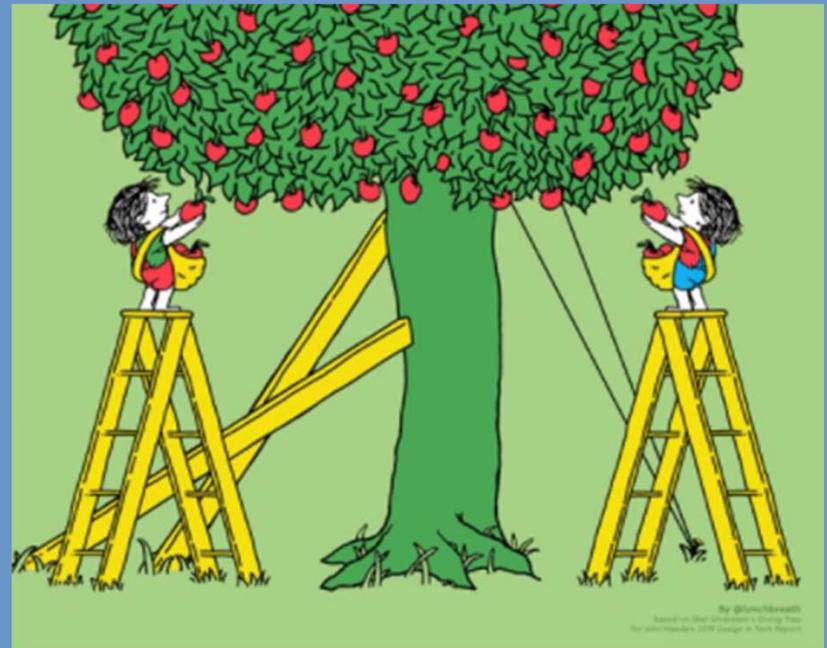
Kathleen Yip
Lead equity analyst, CPUC Energy Division
October 27, 2020



California Public
Utilities Commission

OVERVIEW

- Introduction
- Equity related definitions at the CPUC
- Data sources to identify vulnerable communities
- Next steps
- Questions and discussion



Source: Tony Ruth, *Tony Ruth's Equity Series* (2019)

Equity related definitions at the CPUC

HISTORY OF EQUITY DEFINITIONS AT THE CPUC

- Some designations created before CalEnviroScreen
 - Example: EV charging infrastructure installation through NRG settlement used low-income census tracts identified by PUMA (U.S. Census) data (2013)
 - Example: MASH program determined eligibility by identifying homes that received low-income housing tax credits, bonds, or grants
- Pursuant to SB 535, CalEnviroScreen was created to identify disadvantaged communities
- CPUC starting using CalEPA's definition of top 25 percent most affected census tracts in CalEnviroScreen
- Stakeholder comments and DACAG Equity Framework helped expand CPUC thinking on who are the target communities for CPUC programs

ENVIRONMENTAL AND SOCIAL JUSTICE COMMUNITIES DEFINITION AT THE CPUC

ESJ Action Plan communities are identified as those where residents are:

- Predominantly communities of color or low-income;
- Underrepresented in the policy setting or decision-making process;
- Subject to a disproportionate impact from one or more environmental hazards; and
- Likely to experience disparate implementation of environmental regulations and socioeconomic investments in their communities

On the ground, targeted communities typically include but are not limited to:

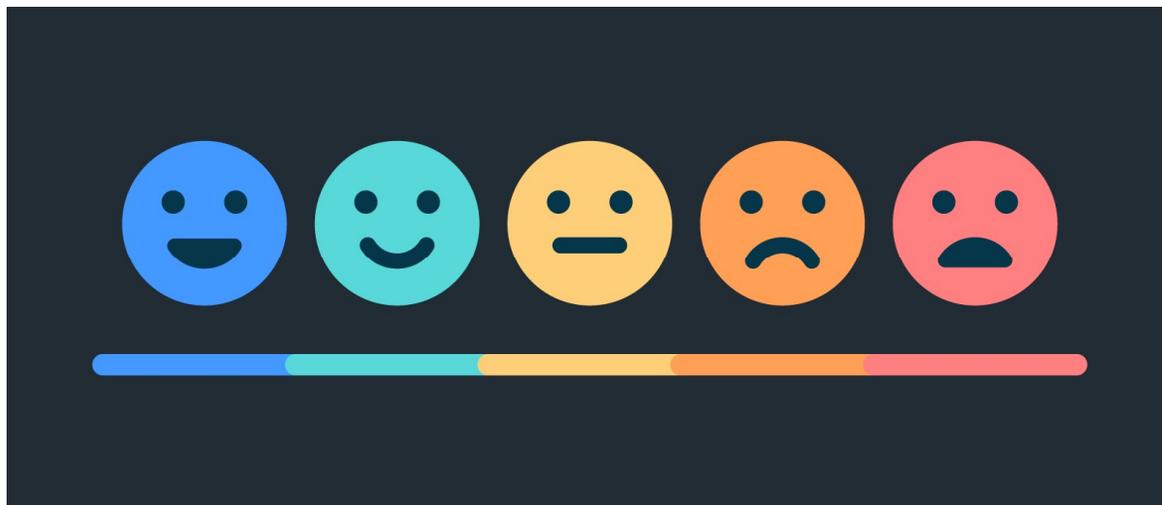
- Disadvantaged Communities, located in the most environmentally burdened California census tracts, as determined by the 25 percent highest scores (75th percentile) when using Cal EPA's [CalEnviroScreen tool](#);
- All Tribal lands;
- Low-income households (Household incomes below 80 percent of the area median income); and
- Low-income census tracts (Census tracts where aggregated household incomes are less than 80 percent of area or state median income).

Source: [CPUC Environmental & Social Justice Action Plan \(2019\)](#)

SELECTED EXAMPLES OF DISADVANTAGED COMMUNITIES DEFINITION AT THE CPUC

PROGRAM/PROCEEDING NAME	DISADVANTAGED COMMUNITY DEFINITION
San Joaquin Valley Affordable Energy Proceeding	Must be in either Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, or Tualre. Must also have: (1) at least 25% of residential households enrolled in CARE, (2) population greater than 100 persons with geographic boundary, (3) has geographic boundary no further than seven miles from the nearest natural gas pipeline
Transportation Electrification Framework	(1) Top 25% census tracts in CalEnviroScreen; (2) All tribal lands; (3) low-income households with income below 80% of AMI; (4) low-income census tracts where aggregated HH incomes are <80% of area or state median income
Climate Adaptation	"Disadvantaged vulnerable community"; (1) Top 25% highest scoring census tracts in CalEnviroScreen 3.0; highest 5% of CalEnviroScreen's Pollution Burden, but do not have an overall CalEnviroScreen score; (2) all California tribal lands; (3) census tracts with median household incomes less than 60% of state median income
DAC-Green Tariff	(1) Top 25% highest scoring census tracts in CalEnviroScreen 3.0; highest 5% of CalEnviroScreen's Pollution Burden, but do not have an overall CalEnviroScreen score; (2) CARE and FERA eligible
Self-Generation Incentive Program	Top 25% highest scoring census tracts in CalEnviroScreen 3.0; highest 5% of CalEnviroScreen's Pollution Burden, but do not have an overall CalEnviroScreen score
Community Solar Green Tariff	(1) Top 25% census tracts under CalEnviroScreen, but top 5% of census tracts are to be prioritized; (2) customers in the San Joaquin Valley programs
Solar on Multifamily Affordable Housing	(1) Top 25% highest scoring census tracts in CalEnviroScreen 3.0; highest 5% of CalEnviroScreen's Pollution Burden, but do not have an overall CalEnviroScreen score; (2) property where 80% of residents have incomes below 60% of the area median income

EQUITY DEFINITIONS IN PROCEEDINGS



EQUITY DEFINITION IN TRANSPORTATION ELECTRIFICATION PROGRAMS

- Parties raised issue whether CPUC should use CalEnviroScreen to define DAC on a utility service territory or statewide basis
- Parties have commented that requiring **broad DAC requirements within programs that address workplace and multi-family charging are not necessarily ensuring that the benefits go directly to DAC residents**, since there are often workplaces in DACs that could receive these benefits but whose employees do not reside in a DAC
 - CPUC attempted to address this in the Charge Ready 2 programs by requiring 15% deployment at MF homes in DACs

HOW SHOULD RESOURCES BE ALLOCATED?

- Example comments from Climate Adaptation Proceeding
- Some parties commented DACs should be limited to **<80% statewide median income**
- Some parties commented DAC definition should be limited **<60% statewide median income** to prioritize communities that have the most significant adaptation issues because of income.
 - “to create **meaningful prioritization of limited climate adaptation actions and investments**, the definition of low-income communities that are disadvantaged should reflect about 20% of state census tracts, which represents about 20% of the state population and is consistent with other legislature and studies regarding the most impacted low-income disadvantaged communities.” -Joint opening comments: CEJA, CBE, Leadership Counsel, and UC Berkeley

EXAMPLE OF PARTY COMMENTS ON INCOME THRESHOLDS IN EQUITY DEFINITIONS

Chart 1: Breakdown of Census Tracts Identified as Low-Income

Definition	Percentage of Census Tracts Identified ¹⁷
Census Tracts with Median Household Incomes Less than 80% of Statewide <i>and</i> Area Median Household Income	48%
Census Tracts with Median Household Incomes Less than 80% of Statewide Median Household Income <i>only</i>	33%
Census Tracts with Median Household Incomes Below 60% of Statewide Median Household Income	17%

Source: Joint Opening Comments from CEJA, CBE, Leadership Counsel, and UC Berkeley on R.18-04-019 (2018)

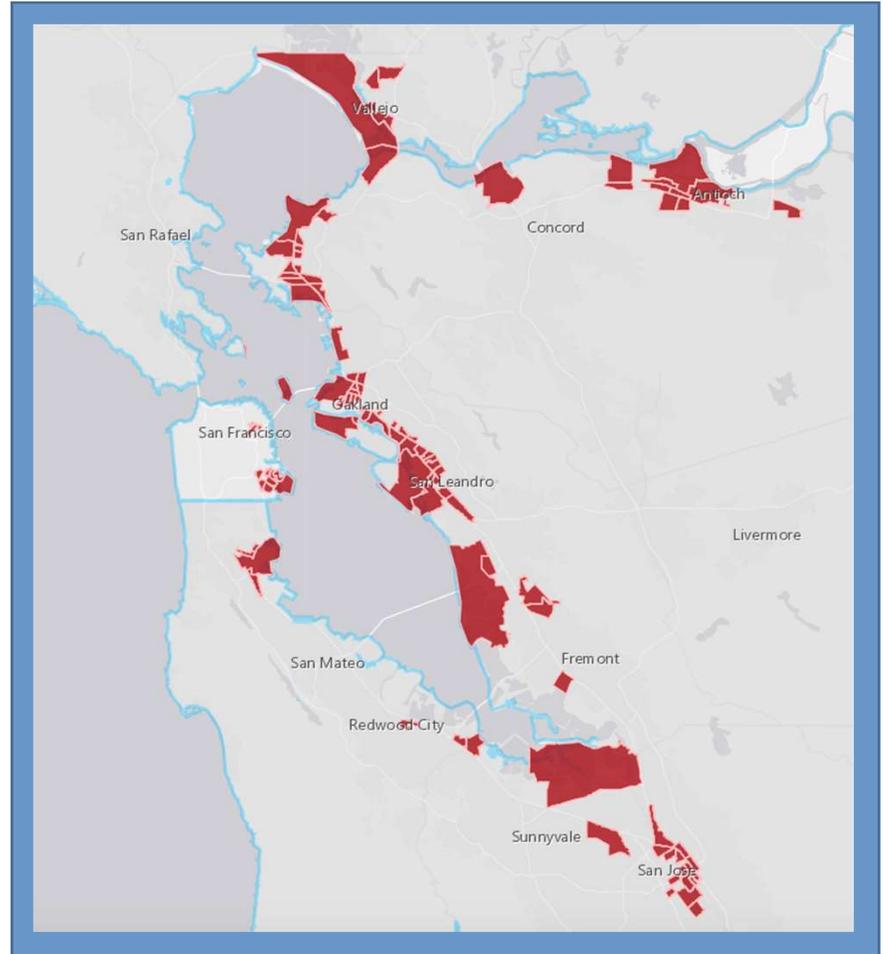


QUESTIONS ON EQUITY DEFINITIONS

- How can we create a template-like or baseline definition that allows for modification of DAC definition to fit different needs, while providing more standardization?
- What are data sources to identify vulnerable communities beyond CES?
- How to identify tribal lands?

Data sources to identify vulnerable communities

DACs as identified by CalEnviro Screen



WHAT ARE SOURCES TO IDENTIFY VULNERABLE COMMUNITIES BEYOND CALENVIROSCREEN?

- CalEnviroScreen is used to identify communities most impacted by air pollution
- Parties identified other tools like Cal-Adapt and CCHViz in the climate change adaptation proceeding

Gaps:

- What are other resources to identify vulnerabilities that are not captured by CES – for purposes of wildfire, PSPS, climate adaptation, etc.
- What are the right indicators to measure/track?

HOW TO IDENTIFY TRIBAL LANDS

- EE Portfolio Administrators and the IOU ESA Program are not required to report on the number of customers served in tribal lands in their Annual Reports
- CPUC ESJ Action Plan uses “all tribal lands” in definition
 - Mostly using Bureau of Indian Affairs (BIA) data to identify federally recognized tribal lands; however, many tribes in California do not enjoy federal recognition status
- Staff is exploring using California’s Native American Heritage Commission’s Digital Atlas as a resource to identify lands

Gaps

- How do we identify/map tribal lands that are not federally recognized?
- What are the sources CPUC should be using to identify tribal communities?
- Should we explore using “all tribal people” instead of, or in conjunction with, “all tribal lands”?

Next steps

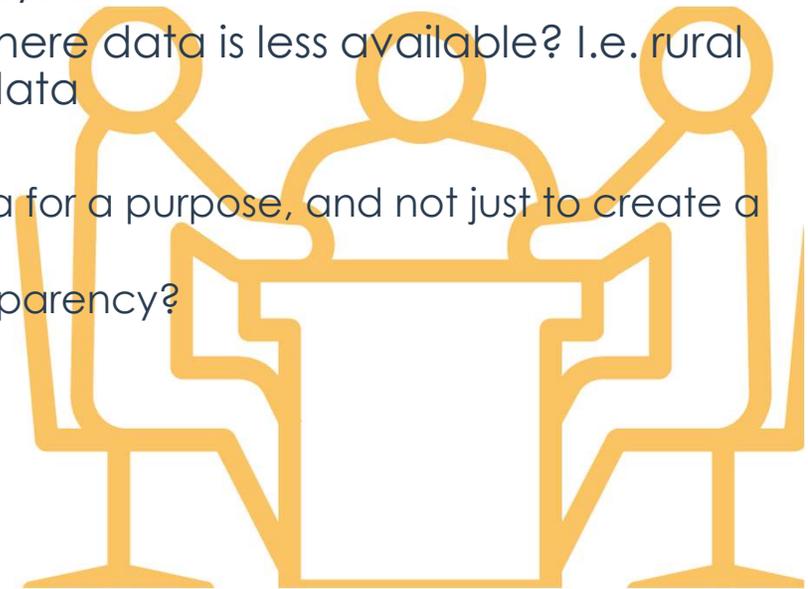


TIMELINE OF PARALLEL PROCESSES

- Environmental and Social Justice Action Plan CPUC-wide update
 - Public workshop in late 2020/early 2021
 - Plan update in 2021
- Presentation to Disadvantaged Communities Advisory Group on definitions and data – November 2020

OTHER GAPS FOR FUTURE DISCUSSIONS

- How should we measure impact in vulnerable communities?
 - What are the right indicators to measure/track?
 - How do we measure impact in areas where data is less available? I.e. rural areas that are not captured in census data
 - How should we use this data?
 - How do we ensure we're collecting data for a purpose, and not just to create a data repository that is never used.
 - How should we use data to create transparency?



Questions and Discussion



QUESTIONS ON EQUITY RELATED DEFINITIONS

- How can we create a template-like or baseline definition that allows for modification of DAC definition to fit different needs, while providing more standardization?
- What are data sources to identify vulnerable communities beyond CalEnviroScreen?
- What are the right indicators to measure/track?
- What are the sources CPUC should be using to identify tribal communities?

Thank you!

Kathleen Yip

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Affordability OIR – Overview and 2018 Results



Ankit Jain – Energy Division Analyst, Retail Rates Group
October 27, 2020





Affordability Proceeding Overview

- **Goals:**
 - Develop a framework and principles to identify and define affordability criteria for all utility services under CPUC jurisdiction; and
 - Develop the methodologies, data sources, and processes necessary to comprehensively assess the impacts on affordability of individual CPUC proceedings and utility rate requests.
- **Scope:**
 - Identification and definition of affordability criteria for CPUC - jurisdictional utility services.
 - Methods and processes for assessing affordability impacts across Commission proceedings and utility services.
 - Other issues relating to the CPUC's consideration of the affordability of utility services.
- **Phase 1 focused on developing metrics, Phase 2 is focused on refining and implementing metrics**





Basic Framework

- **Establishes definition of affordability:** “the degree to which a representative household is able to pay for an essential utility service, given its socioeconomic status”.
- **Defines three metrics for affordability:**
 - **Affordability ratio (AR):** the percent of a household’s income that is required to pay for an essential utility service, after non-discretionary costs such as housing and other essential utility services are removed from the household’s income
 - **Hours at minimum wage (HM):** hours of work necessary for a household earning minimum wage to pay for essential utility service charges
 - **Socioeconomic vulnerability index (SEVI):** describes the relative socioeconomic characteristics of communities in terms of poverty, unemployment, educational attainment, linguistic isolation, and percent of income spent on housing





Key Definitions

- **Essential Service Quantities:**
 - **Water:** 600 cubic feet per household per month
 - **Communications:** 1,000 minutes per month of telephone service; 25 Mbps downstream and 3 Mbps upstream broadband service
 - **Electricity:** baseline allowance (based on climate zone)
 - **Gas:** baseline allowance (based on climate zone)
- **Nondiscretionary Costs:**
 - Housing – includes SF and MF, owners and renters
 - Utility Expenses
 - Not included – other necessities such as clothing, food, medical care, childcare, etc. due to lack of geographic variability (much more driven by composition of household rather than where household is located)





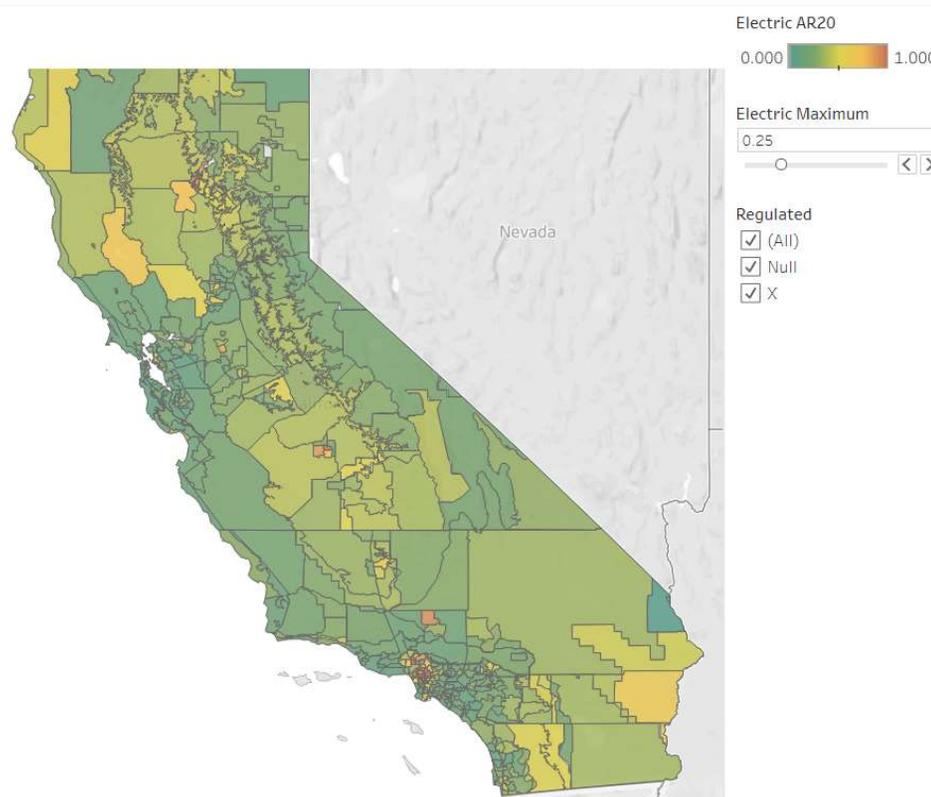
High Level Methodology Overview

- Combine utility bill data with income and housing cost data from Census Bureau's American Community Survey data to calculate AR values for specific geographic areas
- Aggregate AR results and calculate weighted averages for climate zones broken down by **Public Use Microdata Areas (PUMAs)**
- Maps presented here using a color scale with a range from 0 to 0.25, but 0.25 is an arbitrary cutoff
- Will focus on results for households at 20th percentile of income distribution of each PUMA
- Will highlight top 10 areas within the service territory of the three major
72 electric IOUs



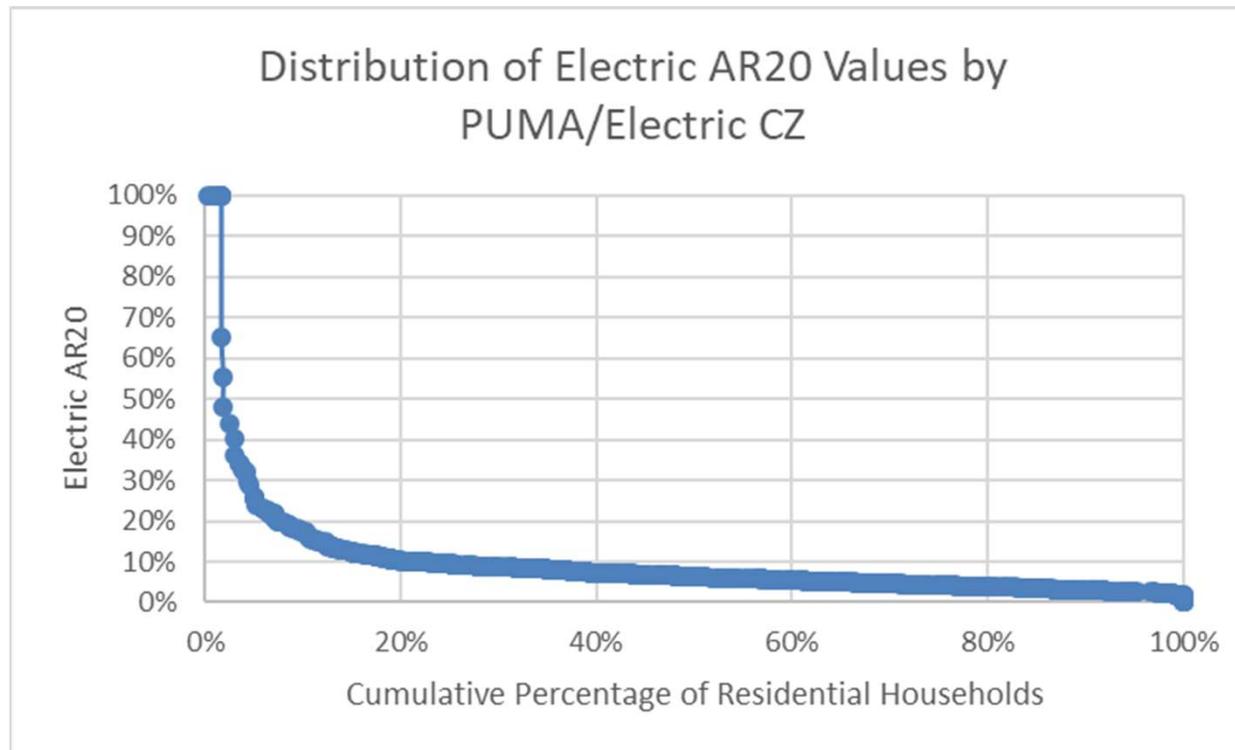


Statewide Electric AR



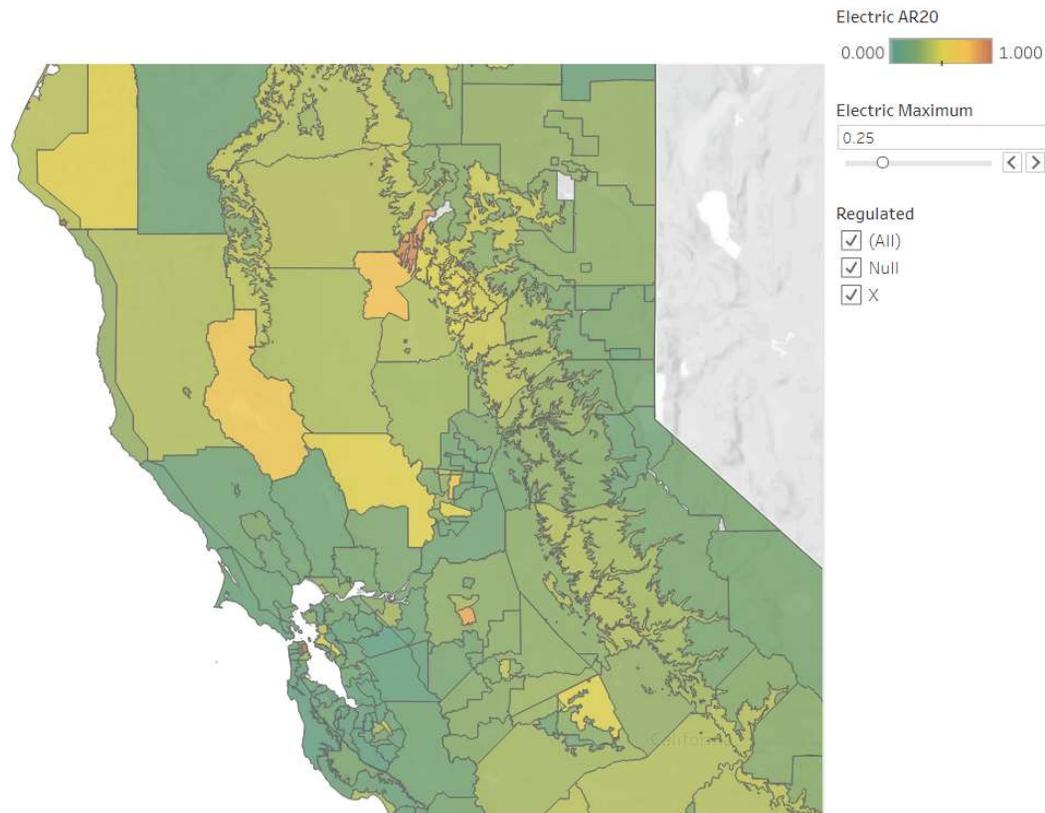


Overall Distribution of AR Values



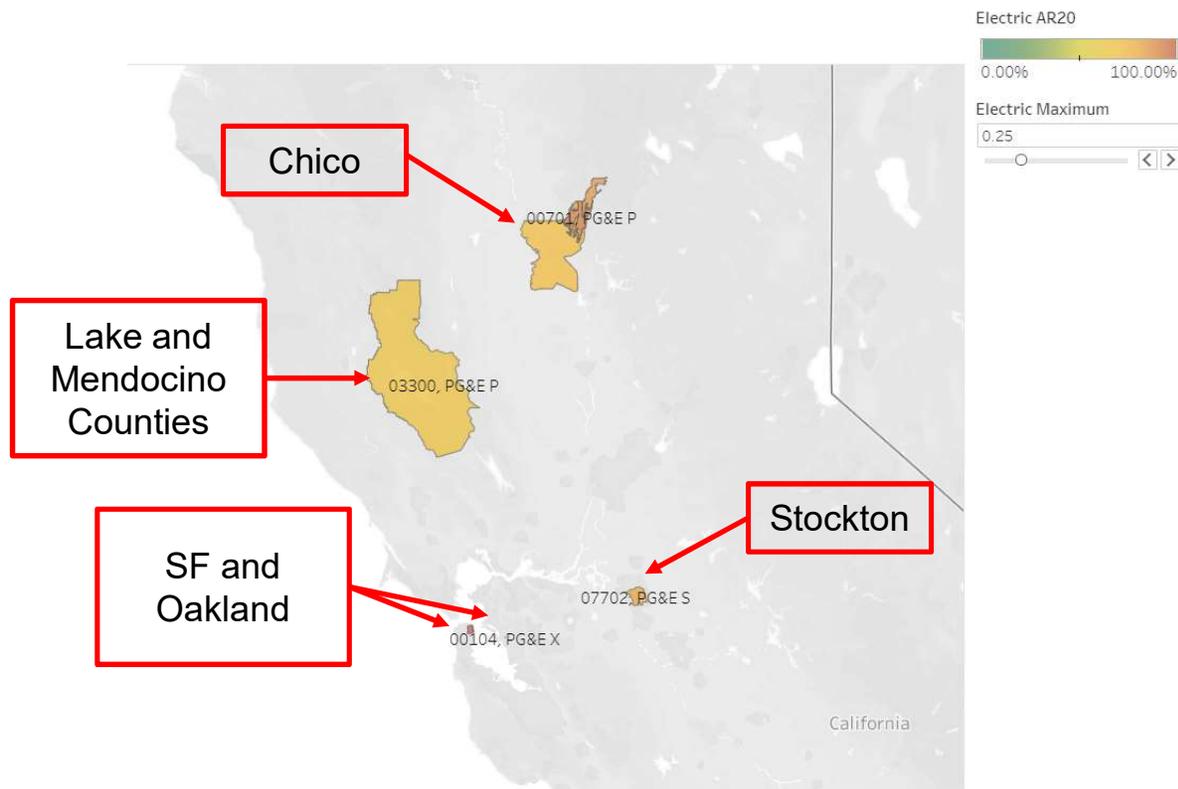


Northern California Electric AR



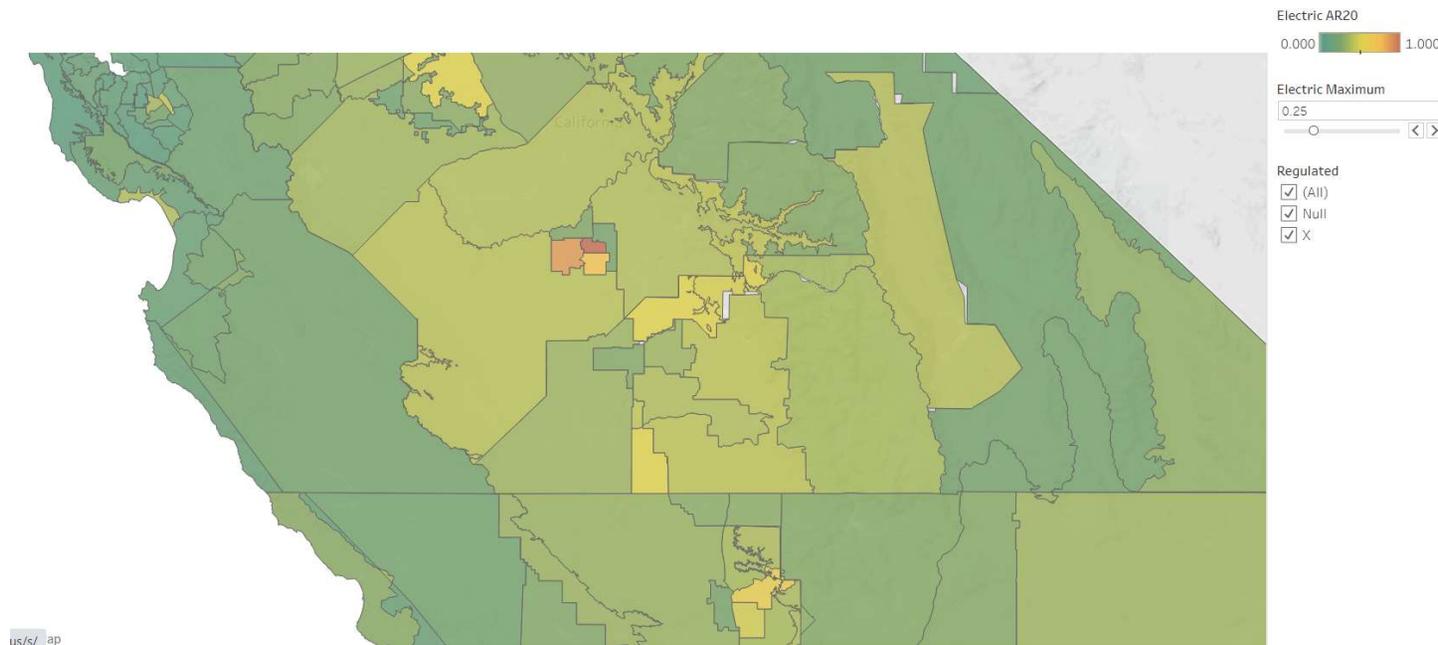


Northern California – Top AR Areas





Central California Electric AR

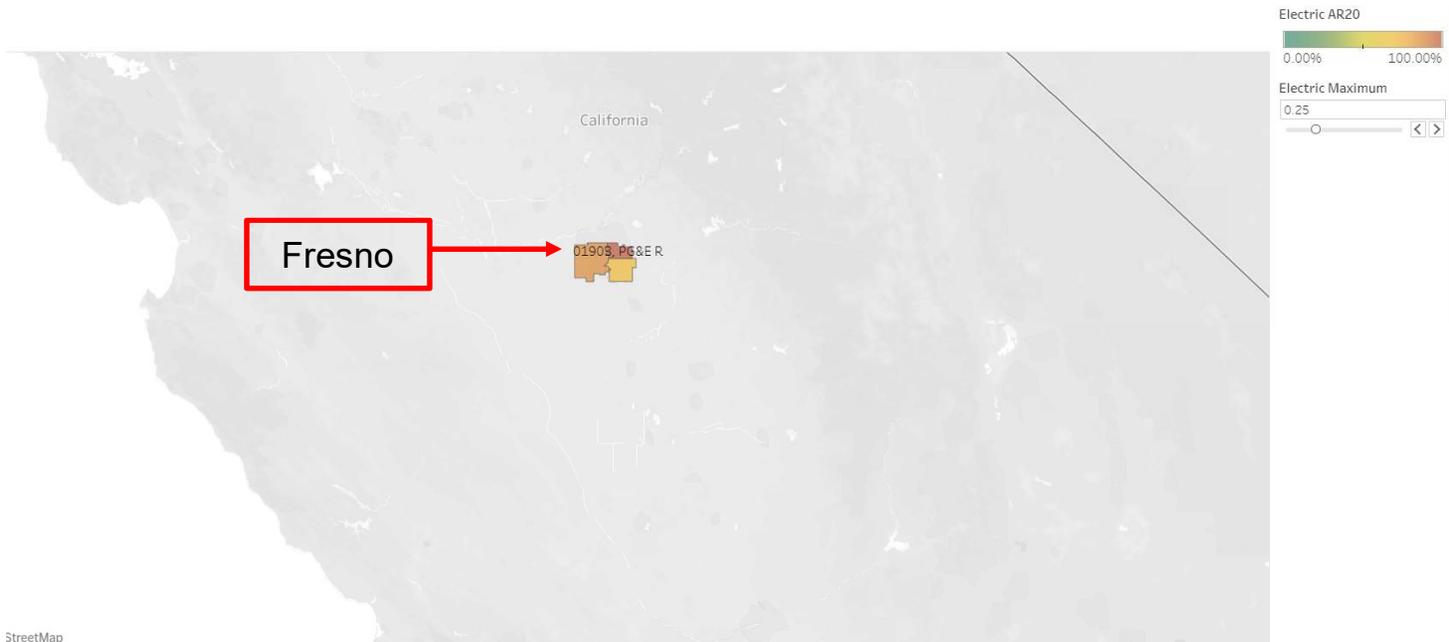


us/s/ ap





Central California – Top AR Areas



StreetMap





PG&E Territory – Top 10 AR Values

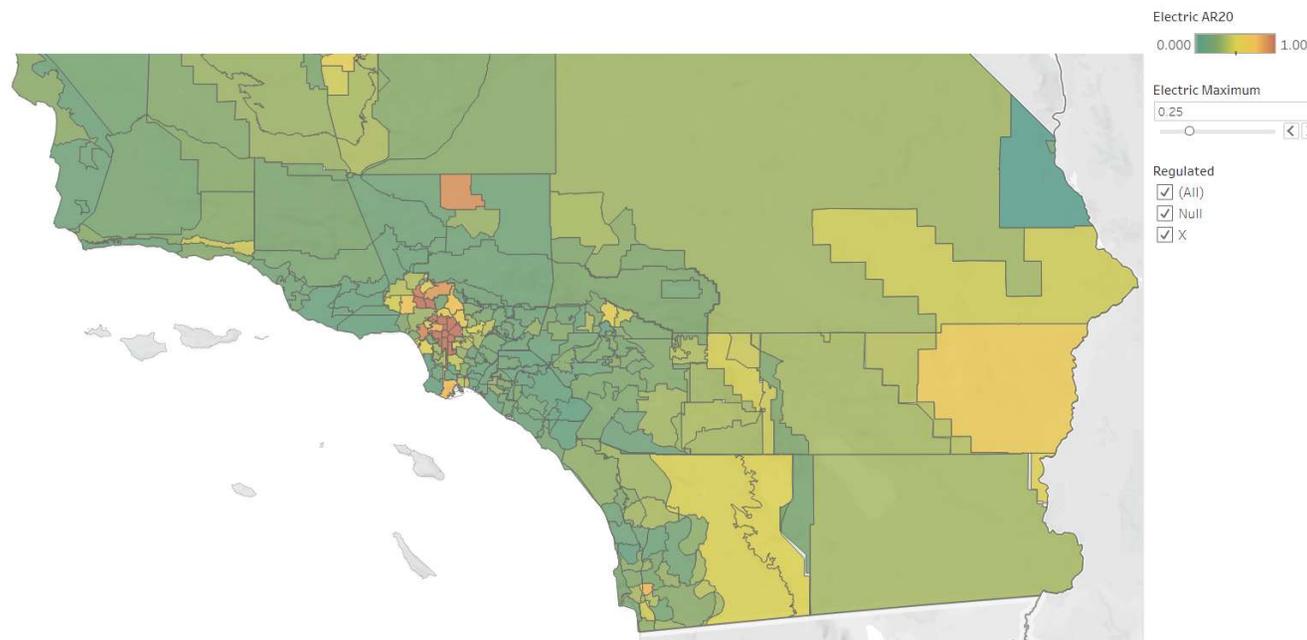
Climate Zone	PUMA	County/City	Electric AR20	20th Percentile Income (\$/yr)	Housing Cost for 20th Percentile Income Household (\$/month)	Avg. Monthly Essential Usage Electric Bill (Basic)	Avg. Monthly Essential Usage Electric Bill (All-Electric)	Percent of Customers on All-Electric
PG&E T	7503	San Francisco County (Central)--South of Market & Potrero	34.3%	\$ 17,232.50	\$ 1,026.69	\$ 49.72	\$ 74.30	16.4%
PG&E R	1903	Fresno County (Central)--Fresno City (East Central)	28.7%	\$ 14,260.18	\$ 681.15	\$ 85.52	\$ 155.72	13.3%
PG&E P	701	Butte County (Northwest)--Chico City	22.9%	\$ 17,340.88	\$ 819.45	\$ 83.83	\$ 147.32	53.9%
PG&E R	1904	Fresno County (Central)--Fresno City (Southwest)	21.7%	\$ 15,203.87	\$ 653.50	\$ 85.52	\$ 155.72	13.3%
PG&E Y	701	Butte County (Northwest)--Chico City	21.0%	\$ 17,340.88	\$ 819.45	\$ 74.43	\$ 128.35	60.2%
PG&E S	7702	San Joaquin County (Central)--Stockton City (South)	20.3%	\$ 15,857.29	\$ 724.69	\$ 80.33	\$ 139.36	12.0%
PG&E S	701	Butte County (Northwest)--Chico City	18.3%	\$ 17,340.88	\$ 819.45	\$ 80.33	\$ 139.36	12.0%
PG&E R	1905	Fresno County (Central)--Fresno City (Southeast)	17.7%	\$ 16,257.07	\$ 645.43	\$ 85.52	\$ 155.72	13.3%
PG&E X	104	Alameda County (North Central)--Oakland City (South Central)	16.9%	\$ 19,211.01	\$ 1,011.92	\$ 67.40	\$ 83.27	14.6%
PG&E P	3300	Lake & Mendocino Counties	16.6%	\$ 18,262.38	\$ 654.86	\$ 83.83	\$ 147.32	53.9%

- Statewide average 20th percentile income level based on PUMA-level income distributions: \$31,213.66/year
- Statewide average estimated housing cost for 20th percentile income households: \$1,220.18/month



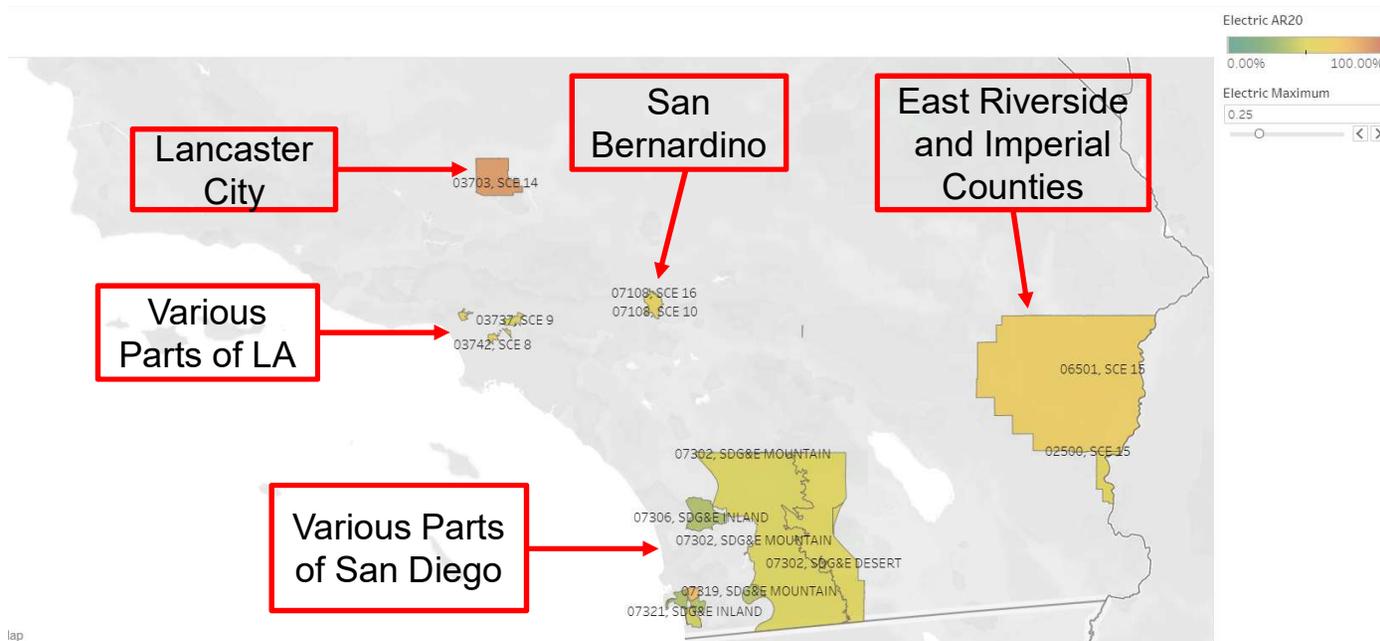


Southern California Electric AR





Southern California – Top AR Areas



lap





SCE Territory – Top 10 AR Values

Climate Zone	PUMA	County/City	Electric AR20	20th Percentile Income (\$/yr)	Housing Cost for 20th Percentile Income Household (\$/month)	Avg. Monthly Essential Usage Electric Bill (Basic)	Avg. Monthly Essential Usage Electric Bill (All-Electric)	Percent of Customers on All-Electric
SCE 9	3744	Los Angeles County (Central)--LA City (East Central/Central City & Boyle Heights)	100.0%	\$ 12,058.24	\$ 816.14	\$ 61.66	\$ 95.01	8.6%
SCE 14	3703	Los Angeles County (North Central)--Lancaster City	22.6%	\$ 16,542.81	\$ 949.44	\$ 65.18	\$ 109.54	8.7%
SCE 15	6501	Riverside County (East)--Indio, Coachella, Blythe & La Quinta (East) Cities	16.2%	\$ 18,250.46	\$ 770.72	\$ 97.10	\$ 107.41	14.3%
SCE 9	3731	Los Angeles County (Central)--West Hollywood & Beverly Hills Cities	14.8%	\$ 26,788.68	\$ 1,632.63	\$ 61.66	\$ 95.01	8.6%
SCE 10	7108	San Bernardino County (Southwest)--San Bernardino City (West)	13.8%	\$ 16,518.01	\$ 753.15	\$ 66.41	\$ 93.62	9.2%
SCE 15	2500	Imperial County--El Centro City	13.7%	\$ 16,881.54	\$ 599.06	\$ 97.10	\$ 107.41	14.3%
SCE 8	3742	Los Angeles County (Central)--Huntington Park City, Florence-Graham & Walnut Park	13.6%	\$ 18,720.41	\$ 1,021.79	\$ 50.63	\$ 63.77	10.9%
SCE 16	7108	San Bernardino County (Southwest)--San Bernardino City (West)	13.6%	\$ 16,518.01	\$ 753.15	\$ 59.51	\$ 108.74	18.2%
SCE 9	3737	Los Angeles County (Central)--Monterey Park & Rosemead Cities	12.3%	\$ 22,326.38	\$ 1,120.09	\$ 61.66	\$ 95.01	8.6%
SCE 9	3741	Los Angeles County (Central)--Bell Gardens, Bell, Maywood, Cudahy & Commerce Cities	12.2%	\$ 20,372.21	\$ 1,033.06	\$ 61.66	\$ 95.01	8.6%

- Statewide average 20th percentile income level based on PUMA-level income distributions: \$31,213.66/year
- Statewide average estimated housing cost for 20th percentile income households: \$1,220.18/month





SDG&E Territory – Top 10 AR Values

Climate Zone	PUMA	County/City	Electric AR20	20th Percentile Income (\$/yr)	Housing Cost for 20th Percentile Income Household (\$/month)	Avg. Monthly Essential Usage Electric Bill (Basic)	Avg. Monthly Essential Usage Electric Bill (All-Electric)	Percent of Customers on All-Electric
SDG&E INLAND	7317	San Diego County (South Central)--San Diego City (Central/Mid-City)	19.4%	\$ 19,873.77	\$ 1,027.15	\$ 74.22	\$ 105.45	23.1%
SDG&E COASTAL	7317	San Diego County (South Central)--San Diego City (Central/Mid-City)	17.4%	\$ 19,873.77	\$ 1,027.15	\$ 67.86	\$ 91.50	20.6%
SDG&E INLAND	7321	San Diego County (Southwest)--Chula Vista (West) & National City Cities	12.9%	\$ 21,306.39	\$ 984.58	\$ 74.22	\$ 105.45	23.1%
SDG&E DESERT	7302	San Diego County (North & East)--Fallbrook, Alpine & Valley Center	12.5%	\$ 28,178.93	\$ 1,189.92	\$ 98.08	\$ 149.70	53.7%
SDG&E MOUNTAIN	7302	San Diego County (North & East)--Fallbrook, Alpine & Valley Center	12.3%	\$ 28,178.93	\$ 1,189.92	\$ 98.47	\$ 167.87	39.3%
SDG&E COASTAL	7321	San Diego County (Southwest)--Chula Vista (West) & National City Cities	11.6%	\$ 21,306.39	\$ 984.58	\$ 67.86	\$ 91.50	20.6%
SDG&E MOUNTAIN	7319	San Diego County (South Central)--Lemon Grove City, La Presa & Spring Valley	10.1%	\$ 30,833.62	\$ 1,211.36	\$ 98.47	\$ 167.87	39.3%
SDG&E INLAND	7318	San Diego County (South)--San Diego City (Southeast/Encanto & Skyline)	9.7%	\$ 25,878.21	\$ 1,112.47	\$ 74.22	\$ 105.45	23.1%
SDG&E COASTAL	7316	San Diego County (South Central)--San Diego City (Central/Centre City & Balboa Park)	9.2%	\$ 24,927.51	\$ 1,072.47	\$ 67.86	\$ 91.50	20.6%
SDG&E INLAND	7306	San Diego County (Northwest)--Escondido City (East)	9.1%	\$ 27,681.53	\$ 1,196.86	\$ 74.22	\$ 105.45	23.1%

- Statewide average 20th percentile income level based on PUMA-level income distributions: \$31,213.66/year
- Statewide average estimated housing cost for 20th percentile income households: \$1,220.18/month





Income Implications of Energy Efficiency – PG&E

Climate Zone	PUMA	County/City	Electric AR20	Disposable Income Change Associated with 1% Reduction in Electric Bill (%)	Disposable Income Change Associated with 1% Reduction in Electric Bill (\$/yr)
PG&E T	7503	San Francisco County (Central)--South of Market & Potrero	34.3%	0.52%	\$ 6.45
PG&E R	1903	Fresno County (Central)--Fresno City (East Central)	28.7%	0.40%	\$ 11.38
PG&E P	701	Butte County (Northwest)--Chico City	22.9%	0.30%	\$ 14.17
PG&E R	1904	Fresno County (Central)--Fresno City (Southwest)	21.7%	0.28%	\$ 11.38
PG&E Y	701	Butte County (Northwest)--Chico City	21.0%	0.27%	\$ 12.83
PG&E S	7702	San Joaquin County (Central)--Stockton City (South)	20.3%	0.25%	\$ 10.49
PG&E S	701	Butte County (Northwest)--Chico City	18.3%	0.22%	\$ 10.49
PG&E R	1905	Fresno County (Central)--Fresno City (Southeast)	17.7%	0.22%	\$ 11.38
PG&E X	104	Alameda County (North Central)--Oakland City (South Central)	16.9%	0.20%	\$ 8.37
PG&E P	3300	Lake & Mendocino Counties	16.6%	0.20%	\$ 14.17





Income Implications of Energy Efficiency – SCE

Climate Zone	PUMA	County/City	Electric AR20	Disposable Income Change Associated with 1% Reduction in Electric Bill (%)	Disposable Income Change Associated with 1% Reduction in Electric Bill (\$/yr)
SCE 9	3744	Los Angeles County (Central)--LA City (East Central/Central City & Boyle Heights)	100.0%	N/A	\$ 7.74
SCE 14	3703	Los Angeles County (North Central)--Lancaster City	22.6%	0.29%	\$ 8.28
SCE 15	6501	Riverside County (East)--Indio, Coachella, Blythe & La Quinta (East) Cities	16.2%	0.19%	\$ 11.83
SCE 9	3731	Los Angeles County (Central)--West Hollywood & Beverly Hills Cities	14.8%	0.17%	\$ 7.74
SCE 10	7108	San Bernardino County (Southwest)--San Bernardino City (West)	13.8%	0.16%	\$ 8.27
SCE 15	2500	Imperial County--El Centro City	13.7%	0.16%	\$ 11.83
SCE 8	3742	Los Angeles County (Central)--Huntington Park City, Florence-Graham & Walnut Park	13.6%	0.16%	\$ 6.25
SCE 16	7108	San Bernardino County (Southwest)--San Bernardino City (West)	13.6%	0.16%	\$ 8.22
SCE 9	3737	Los Angeles County (Central)--Monterey Park & Rosemead Cities	12.3%	0.14%	\$ 7.74
SCE 9	3741	Los Angeles County (Central)--Bell Gardens, Bell, Maywood, Cudahy & Commerce Cities	12.2%	0.14%	\$ 7.74





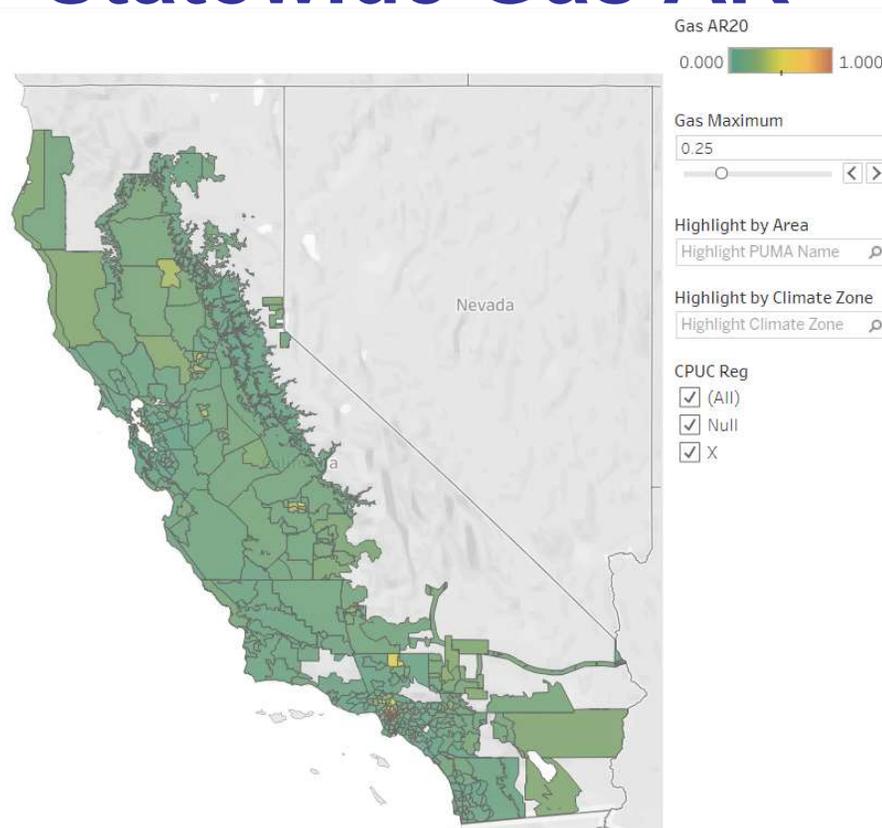
Income Implications of Energy Efficiency – SDG&E

Climate Zone	PUMA	County/City	Electric AR20	Disposable Income Change Associated with 1% Reduction in Electric Bill (%)	Disposable Income Change Associated with 1% Reduction in Electric Bill (\$/yr)
SDG&E INLAND	7317	San Diego County (South Central)--San Diego City (Central/Mid-City)	19.4%	0.24%	\$ 9.77
SDG&E COASTAL	7317	San Diego County (South Central)--San Diego City (Central/Mid-City)	17.4%	0.21%	\$ 8.73
SDG&E INLAND	7321	San Diego County (Southwest)--Chula Vista (West) & National City Cities	12.9%	0.15%	\$ 9.77
SDG&E DESERT	7302	San Diego County (North & East)--Fallbrook, Alpine & Valley Center	12.5%	0.14%	\$ 15.09
SDG&E MOUNTAIN	7302	San Diego County (North & East)--Fallbrook, Alpine & Valley Center	12.3%	0.14%	\$ 15.09
SDG&E COASTAL	7321	San Diego County (Southwest)--Chula Vista (West) & National City Cities	11.6%	0.13%	\$ 8.73
SDG&E MOUNTAIN	7319	San Diego County (South Central)--Lemon Grove City, La Presa & Spring Valley	10.1%	0.11%	\$ 15.09
SDG&E INLAND	7318	San Diego County (South)--San Diego City (Southeast/Encanto & Skyline)	9.7%	0.11%	\$ 9.77
SDG&E COASTAL	7316	San Diego County (South Central)--San Diego City (Central/Centre City & Balboa Park)	9.2%	0.10%	\$ 8.73
SDG&E INLAND	7306	San Diego County (Northwest)--Escondido City (East)	9.1%	0.10%	\$ 9.77



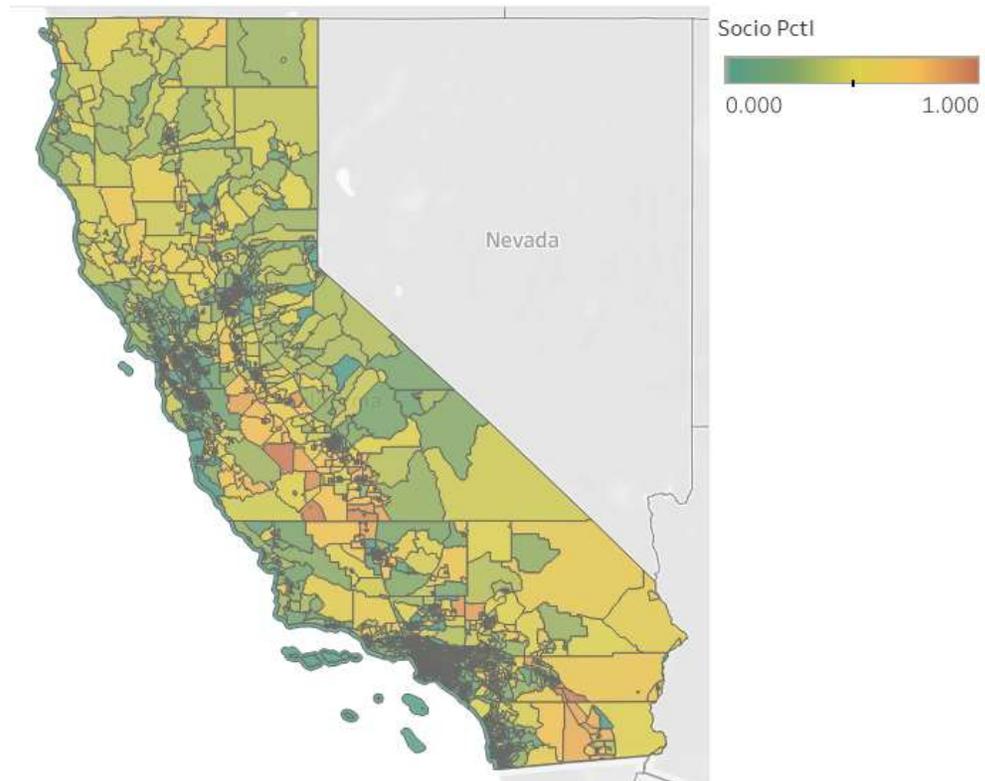


Statewide Gas AR





Statewide SEVI





Contact Info and Additional Resources

Ankit Jain – Energy Division, Retail Rates Group

Ankit.Jain@cpuc.ca.gov

For more details on Affordability OIR:

- [Revised Staff Proposal](#) – info on metrics and methodology
- [Phase I Decision](#)
- [Amended Scoping Memo](#) – Phase II scope and schedule
- Annual Affordability Report and publicly available Tableau map with results will be issued by end of 2020



CPUC Presenter Q&A

PLEASE WRITE SUCCINCT QUESTIONS IN THE CHAT TO
“EVERYONE”

Agenda Day 2 (Wednesday Oct 28, 9AM-12)

➤ **Presentations**

- Update on Multifamily Programs (Sarah Lerhaupt, CPUC)
- Case study on Tennant Access: Self-Generation Incentive Program–Battery storage for medical/essential needs (Tory Francisco, CPUC)
- Case study on Program Layering: BayREN/MCE BAMBE streamlining (Grace Peralta, MCE)
- Data to identify Naturally Occurring Affordable Housing (Hal Nelson, Res-Intel)

➤ **Facilitated breakout discussions**

➤ **Open Forum**

THANK YOU!

SEE YOU TOMORROW 9AM-12PM FOR “AN INFLECTION
POINT FOR MF ENERGY PROGRAMS”