2023 Annual Conference

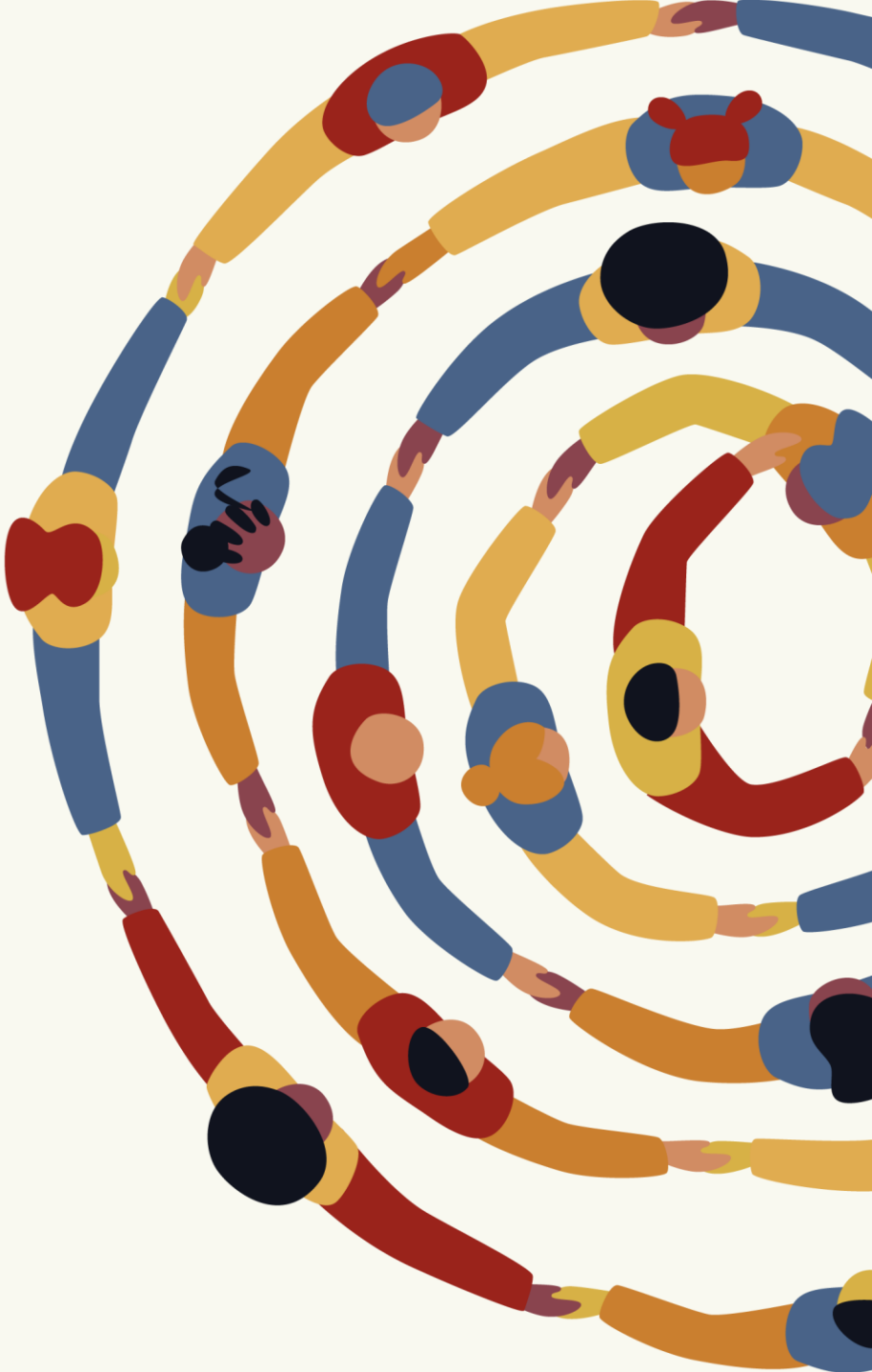
All Hands on Deck!

Navigating a Sustainable Future

June 13 - 15, 2023

Pre-Conference June 12

Sheraton San Diego Hotel & Marina



2023 Annual Conference
All Hands on Deck!
Navigating a Sustainable Future

Piloting a New Statewide Energy Assistance Approach to Reduce Energy Insecurity

Jackie Berger, APPRISE
Carol Edwards, Southern California Edison

neuac
NATIONAL ENERGY & UTILITY AFFORDABILITY COALITION

Presentation Overview

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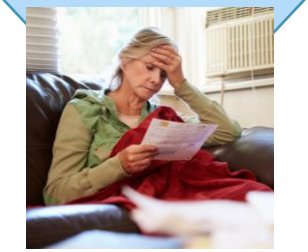
Introduction

Payment Assistance Design Options

California's Income-Based Bill Assistance



Pilot Goals, Evaluation Requirements & Timeline

Evaluation Goals and Design

Discussion

Payment Assistance Design Options

Program Design Definitions

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		Full Bill	Design	Subsidy	Net Bill
Discount	• X% discount on rate or bill • Discount based on poverty level	$200	50% Discount	$100	$100

Fixed Credit	• <u>Fixed monthly credit</u> to achieve target burden
	• Example
	  • Target energy burden: 6%
	  • Household income: $20,000
	  • Target bill: 6% * $20,000 =$1,200
	  • Last year's bill: $2,400
	  • Annual credit: $2,400 - $1,200=$1,200
	  • Monthly credit: $1,200/12 = $100
		$200	6% Burden	$100	$100

Percentage of Income Payment Program (PIPP)	• <u>Fixed monthly bill</u> set to reach target burden
	• Credit is the difference between the full bill and the monthly cost
	• Example
	  • Target bill: 6% * $20,000 =$1,200
	  • Monthly bill: $1,200/12=$100
	  • This month credit: $200-$100=$100
		$200	6% Burden	$100	$100

Example impacts shown above.

Bill Impacts

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	Gross Bill	Discount		Fixed Credit		Percentage of Income Payment	
		50% discount		$20,000 income 6%=$1200 $2400 estimated bill $2400-$1200=$1200 Monthly subsidy=$100		$20,000 income 6% = $1200/12 Payment=$100	
		Bill	Subsidy	Bill	Subsidy	Bill	Subsidy
Initial	$200	$100	$100	$100	$100	$100	$100
Rate Increase	$240	$120	$120	$140	$100	$100	$140
Usage Reduction	$160	$80	$80	$60	$100	$100	$60

Example impacts shown above.

Energy Burden Targeting

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- Fixed Benefit

Poverty Level	Income	Pre-Benefit		Benefit	Post-Benefit	
		Bill	Burden		Bill	Burden
<=50%	$10,000	$2,000	20.0%	$700	$1,300	13.0%
51%-100%	$20,000	$2,000	10.0%	$700	$1,300	6.5%
101%-150%	$35,000	$2,000	5.7%	$700	$1,300	3.7%

- Fixed Burden

Poverty Level	Income	Pre-Benefit		Benefit	Post-Benefit	
		Bill	Burden		Bill	Burden
<=50%	$10,000	$2,000	20.0%	$1,400	$600	6.0%
51%-100%	$20,000	$2,000	10.0%	$800	$1,200	6.0%
101%-150%	$35,000	$2,000	5.7%	$0	$2,000	5.7%

- Burden by Poverty Level

Poverty Level	Income	Pre-Benefit		Burden Target	Benefit	Post-Benefit	
		Bill	Burden			Bill	Burden
<=50%	$10,000	$2,000	20.0%	4.0%	$1,600	$400	4.0%
51%-100%	$20,000	$2,000	10.0%	6.0%	$800	$1,200	6.0%
101%-150%	$35,000	$2,000	5.7%	8.0%	$0	$2,000	5.7%

Example impacts shown above.

Equity Assessment

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- Benefit Equality

Poverty Level	Income	Pre-Benefit		Benefit	Post-Benefit	
		Bill	Burden		Bill	Burden
<=50%	$3,000	$2,000	66.7%	$1,000	$1,000	33.3%
<=50%	$8,000	$2,000	25.0%	$1,000	$1,000	12.5%
<=50%	$13,000	$2,000	15.4%	$1,000	$1,000	7.7%

- Energy Burden Equality

Poverty Level	Income	Pre-Benefit		Benefit	Post-Benefit	
		Bill	Burden		Bill	Burden
<=50%	$3,000	$2,000	66.7%	$1,820	$180	6.0%
<=50%	$8,000	$2,000	25.0%	$1,520	$480	6.0%
<=50%	$13,000	$2,000	15.4%	$1,220	$780	6.0%

Example impacts shown above.

Bill Reduction Options

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Income Based Fixed Charge

ADVANTAGES
- Administrative simplicity
- Easy to understand
- Fixed cost based on income
- Incentive to apply for LIHEAP

DISADVANTAGES
- Benefit is not related to energy burden
- Lower incentive for usage reduction

Bill Discount

ADVANTAGES
- Administrative simplicity
- Easy to understand
- Incentive to reduce usage
- Incentive to apply for LIHEAP

DISADVANTAGES
- Benefit is not related to energy burden

Fixed Credit

ADVANTAGES
- Targets benefit to energy burden
- Fixed monthly credit
- Incentive to reduce usage
- Incentive to apply for LIHEAP

DISADVANTAGES
- Complex to administer
- Difficult for participants to understand
- Does not achieve targeted energy burden

PIPP

ADVANTAGES
- Targets benefit to energy burden
- Directly addresses energy burden
- Fixed monthly payment

DISADVANTAGES
- Complex to administer
- No incentive for usage reduction

California's Income-Based Bill Assistance

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Participating Utilities

- PG&E
- SDG&E
- SCE
- SoCalGas

California's Alternate Rates for Energy (CARE)

Bill Discount Program

California's Percentage of Income Payment Plan (PIPP)

Bill CAP Program

California's Proposed Fixed-Rate Monthly charges

Income-Based Fixed Fees

California's Alternate Rates for Energy

Roughly 1/3 of the residential customers in CA are income-qualified for California's Alternate Rates for Energy (CARE)

Eligibility based on household income and household size as per 200% Federal Poverty Guidelines

CARE offers discounts of roughly 18% (gas) and 30% (electricity) to qualified customers.

Program initiated in 1989

The Commission approved **$8.5 BILLION** for CARE for the 2021-2026 program cycle

Percentage of Income Payment Plan Pilot

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- Investor-Owned Utilities (IOUs) ordered to implement a Percentage of Income Payment Plan *Pilot*
- Pilot intended to reduce risk of disconnections among low-income customers

Eligibility requires

(1) enrollment in CARE and
(2) either:
- reside in zip code with a high rate of disconnections OR
- have been disconnected 2+ times prior to moratorium

Pilot
Initiated in 2023

PIPP offers bill cap based on income

- **Tier 1 (0-100% FPL):** $29 for electric and $9 for gas, plus taxes and fees (proof of income may be required*)
- **Tier 2 (101-200% FPL):** $86 for electric and $29 for gas, plus taxes and fees

California's Proposed Fixed Rate Charge

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Recent Assembly Bill requires CA Utilities establish an income-based fixed charge so low-income customers pay lower monthly bill without making any changes in usage.

Bill modification proposed for 2024

- Increasing the flat charge portion of the bill penalizes consumers who use less energy.
- Since lower income customers tend to have lower usage, an income based fixed charge is anticipated to mitigate potential impact on these customers.
- On the other hand, it reduces ALL customers interest in and ability to control and lower their bills by using less energy.

Additional Questions

- How to determine & verify household income for every customer?
- Impact of income, as opposed to usage, to determine cost of energy?

Income-based energy costs

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CARE: 200% FPL		
Household income	**Household size**	**Bill Discount**
$36,620	1-2	30%-35%
46,060	3	
55,500	4	
64,940	5	
74,380	6	
83,820	7	
93,260	8	

Energy Cost =
Energy usage + Discount

PIPP: 4% Energy Burden			
Household income	**Reference Income**	**Monthly income for HH of 3**	**Bill CAP**
0-100% FPL	50%FPL	$905	$38
101-200% FPL	150% FPL	$2745	$116

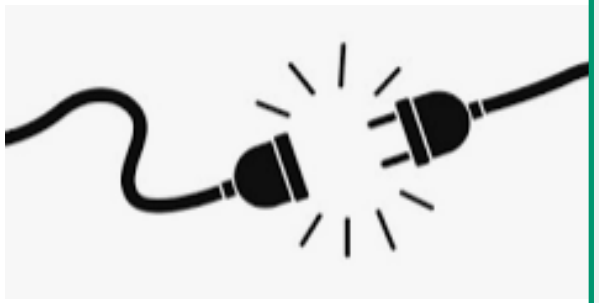
Energy Cost =
Income-based bill cap

Income-based fixed charges:	
Household income	**Fixed charge**
$69,000 or less	$20-$34
$69K-$180,000	$51-73
$180,000 +	$85-$128

Energy Cost =
Income-based fixed charge + usage

Pilot Goals, Evaluation Requirements, & Timeline

Origins of the Percentage of Income Payment Plan Pilot



In 2018 the Commission opened a "Disconnections" Order Instituting Rulemaking (OIR) pursuant to passing a new Senate Bill

- OIR expected to examine new approaches to disconnections, reconnections and containing disconnection related costs
- OIR *not* specific to low-income customers
- Utility disconnection rates are higher among Non-low-income customers relative to low-income customers
- Initiatives independent of programs funded via low income proceeding (e.g., CARE & ESA)
- Several mandated programs initiated to reduce the risk of disconnection among low-income customers
- The Percentage of Income Payment Plan (PIPP) Pilot is one of these initiatives

Evaluation Requirements

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PIPP Decision includes mandated evaluation requirements:

- Evaluator develop semi-annual reporting metrics
- Evaluator develop final evaluation criteria & metrics
- Evaluation include treatment and control group
- Evaluation address 13 mandated research questions
- Evaluation include 18 months of data
- Evaluation complete 25 months after PIPP is initiated

Pilot Evaluation

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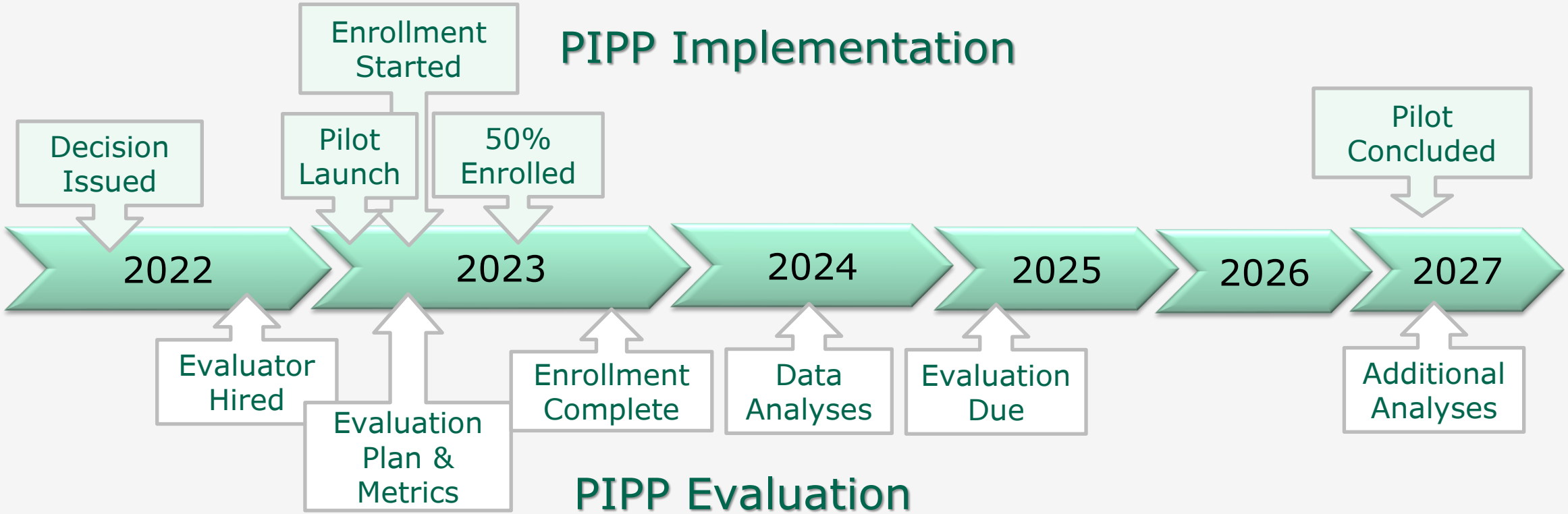
Pilot Goals

- Reduce number of low-income customers at risk of disconnections.
- Encourage energy conservation and participation in energy management programs.
- Control program costs and avoid arrearages and uncollectibles.

Evaluation Objectives

- Determine Pilot impact on disconnections.
- Assess Pilot impact on participant program choices, payment, and energy use.
- Assess Pilot impact on access to essential services.
- Assess program costs for Pilot and for potential future expansion.
- Recommend modifications to Pilot design and continuation and/or expansion.

PIPP Timeline



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PIPP Evaluation Goals and Design

Evaluation Objectives

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Determine Pilot impact on disconnections.

- Did the Pilot reduce the disconnection rate of participants compared to a similar group of customers?
- What was the difference in arrearage or uncollectible payments for Pilot participants compared to a similar group?

→ Impact Analysis

Assess Pilot impact on participant program choices, payment, and energy use.

- How did the Pilot affect participants' energy usage behavior?
- Did the concurrent enrollment in AMP or any other payment plan program affect participants' payment behavior?
- How did the Pilot affect enrollment in ESA, LIHEAP and other energy saving and energy management programs?

→ Impact Analysis

Assess Pilot impact on access to essential services.

- What were the bill savings compared to the CARE bill savings?
- How did this impact access to safe energy usage, including medically-necessary usage?

→ Impact Analysis

→ Participant Survey

Evaluation Objectives

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Assess program costs for Pilot and for potential future expansion.

- How much did the Pilot's subsidies cost, net of CARE subsidies?
- How much did Pilot's administration cost, compared with estimates?

Cost Analysis

Recommend modifications to Pilot design and continuation and/or expansion.

- Were the program designs easy to administer and explain to participants?
- Was the marketing, education, and outreach effective?
- Did the Pilot achieve the goals established in the Decision or show significant potential to achieve these goals with modifications?
- If there is potential with modifications, how should the long-term program designs be modified to best achieve the goals?
- Should the Pilot be modified to achieve the goals?
- Would setting program benefit caps advance the program goal of reducing disconnection rates, and if so, how should the caps be established?

Interviews & Participant Survey

Synthesis

Evaluation Metrics

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	Metric	Definition	Statistics
1	Participation Duration	Number of months customers have been enrolled in the Pilot at the time of the evaluation	Mean, median, and percentiles
2	Pilot Drop Out	Pilot participants who left the Pilot. Reasons for drop out	Number and percent Characteristics of those who drop out
3	Bill Impact	Pilot participants' reduction in energy bills as compared to the Comparison Group (differences-in-differences analysis)	Mean bill reductions ($)
4	Energy Burden	Pilot participants' reduction in energy burden (energy costs/income) as compared to the Comparison Group (differences-in-differences analysis)	Mean and median
5	Payments	Change in proportion of Pilot participants with three, six, nine, and 12 months of consecutive on-time payments as compared to the Comparison Group (differences-in-differences analysis)	Number and percent
6	Payment Coverage	Change in the average percent of annual bill paid by Pilot participants compared to the Comparison Group (differences-in-differences analysis)	Mean
7	Arrearage Forgiveness	Change in the number and percent of Pilot participants with arrears who receive arrearage forgiveness (through the AMP). Average amount of arrearage forgiveness received by Pilot participants who are on the AMP compared to the Comparison Group (differences-in-differences analysis)	Mean and percent
8	Arrearages	Change in the average amount of arrearages incurred in the pre- and post-Pilot participation period compared to the Comparison Group (differences-in-differences analysis)	Mean

Evaluation Metrics

Metric		Definition	Statistics
9	Disconnections	Change in proportion of Pilot participants disconnected compared to the Comparison Group (differences-in-differences analysis using the pre-COVID data)	Number and percent
10	Disconnection Stage	Change in proportion of PIPP participants who reach each disconnection stage compared to the Comparison Group (differences-in-differences analysis)	Number and percent
11	Energy Usage	Change in the average Pilot participant's weather-normalized electric and gas usage compared to the change for the Comparison Group (differences-in-differences analysis)	Means (kWh and therms)
12	Peak Usage	Change in the percent of usage (kWh) during peak periods for Time of Use participants compared to the Comparison Group (differences-in-differences analysis)	Mean
13	Energy Assistance	Change in Pilot participants who received LIHEAP (and any other financial assistance program) assistance (from the year before Pilot enrollment to the year after Pilot enrollment) compared to the change for the Comparison Group (differences-in-differences analysis)	Percentage point change and percent change
14	Energy Efficiency	Change in Pilot proportion of participants who participated in energy saving and energy management programs (from the year before Pilot enrollment to the year after Pilot enrollment) compared to the change for the Comparison Group (differences-in-differences analysis)	Percentage point change and percent change
15	Determinants of Success	Whether any subset of participants is more likely to succeed or benefit from PIPP depending on characteristics such as income (if available), climate zone, historical bill payments, past amount of outstanding arrears, previous payment history, energy usage, and household size	Mean characteristics

Evaluation Approach

- Determine Metrics & Strata
- Collect Data
- Interview IOUs & CBOs
- Assess Impacts & Costs
- Full Program Recommendations

Research Design & Analysis

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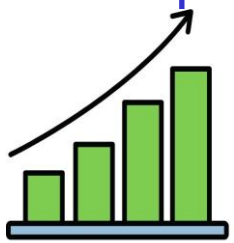
- Quasi-Experimental Design
  - Participants
    - Stratification Variables
      - Arrearage Management Program Participation
      - Arrearages at Enrollment (<$150, ≥$150)
      - Disconnected ≥ once in past year
      - Pilot Tier
  - Comparison Group
    - Propensity score matching
    - Best match for Pilot participants
    - Variables to match
      - Expected to correlate with success
      - Accurate data
  - Power Analysis
    - Assess sample size needed to measure impact
    - Determine smallest impact that can be detected

Comparison Group Matching Variables

- Arrearages
- Disconnections prior to moratorium
- LIHEAP receipt
- AMP participation
- Energy usage
- Climate zone
- Targeted zip code residency

Match Assessment & Adjustment

- Assessment
  - Compare treatment & comparison group characteristics
  - Propensity score analysis
- Adjustment
  - Assess additional variables to include
  - Lower weights for poorer matches
  - Regression analysis to control for the propensity score



Data Analysis

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- Difference-in-Differences Analysis
  - Gross Impact: Treatment Group Change
    - Measures program impact and impact of other factors
  - Net Impact: Treatment Group Change – Comparison Group Change
    - Measures only program impact
- Comparison Group Importance
  - Other factors always can impact participants
  - Pandemic adds another level of exogenous impact
    - Energy usage & bills
    - Available assistance programs
    - Utility collections practices
    - Economic factors
- Random Assignment Not Possible
  - Customers can self-select into program
    - Contact IOU call centers
    - Link on IOU website
  - Invited customers may not join

	Pre	Post	Change	Measured
Treatment Group	Year Before Services	Year After Services	After - Before	Program Impact + Other Factors
Comparison Group	Same Time Period as Treatment Group	Same Time Period as Treatment Group	After - Before	Other Factors
Treatment - Comparison				**Program Impact**

Data Requirements

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Data Needs	Variables	Purpose
Eligible Pilot Population All Eligible Participants	• CCA Participant • Climate Zone • Arrearages • Disconnections • Disconnect Risk • Program Participation	• Characterize eligible population • Determine target group populations • Matched comparison group variables
Pilot Participant Program Data All Enrolled Participants	• Enrollment date • Pilot exit date • Pilot tier	• Characterize participants • Match comparison group • Variables correlated with participation • Variables correlated with success
Transactions & Usage Data Participants & Matched Comparison Group	• Billing & Payment • Assistance • Arrearages	• Impact analysis • Assess program success • Estimate program cost
Other Program Participation Data Participants & Matched Comparison Group	• AMP • ESA • LIHEAP • Other Programs	• Comparison group matching • Assess Pilot impact on participation

Program Analysis

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In-Depth Interviews with Utilities, CCAs, & CBOs

Utility & CCA Interviews

- In-depth telephone interviews
- Utility & CCA outreach staff
- Document ME&O approach
- Collect marketing materials
- Understand challenges & successes
- Determine how to refine outreach
- Improve outreach about PIPP benefits
- Ongoing interviews with IOU implementation staff

CBO Interviews

- CBOs that helped IOUs with ME&O
- Information on customer questions & concerns
- Need for program collateral
- Referrals to assistance – ESA, LIHEAP, AMP, other
- CBO staff buy-in
- Recommendations for outreach improvements

Participant Experience

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Pilot Participant Survey

- Motivation to enroll
- Pilot understanding
- Information source
- Essential service access
- Energy usage impacts
- Additional program participation

Survey Goals

- CA Essential Use Study
- Low- and Moderate-Income (LMI) considerations of essential uses
- Medically necessary equipment
- Refrigerators to keep medicine cold
- Air conditioning/Heating
- Communication

Essential Use

- Instrument design
- Advance letter with $5
- Emails (if available)
- Online survey to start
- Survey data analysis
- Follow-up calling
- Increased response rate
- Spanish interviewing

Survey Implementation

Program Impacts

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Impact Analysis

Levels of Analysis

- Statewide
- Utility
- Targeted Groups
- Other Subgroups – Pilot Tier, Program Participation, Climate Zone, additional

Analysis Periods

- Pre-Enrollment: Year Prior to Pilot Enrollment
- Post-Enrollment: Year Following Pilot Enrollment

Questions Addressed

- Marketing Effectiveness: Time needed to enroll participants
- Bill Savings: Compared to CARE
- Disconnect Impact: After moratorium was lifted
- Customers at Risk of Disconnection: Defined by each IOU
- Arrearages
- Energy Usage
- Payment Behavior
- Program Participation

Program Financials

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Cost Analysis

Pilot Participant Cost

- Administrative
  - Program Design
  - IT Support
  - Utility ME&O
  - Utility CSR Time
  - CBO ME&O
- Subsidy
  - Difference between PIPP & CARE
- Savings
  - Collection Costs
  - Arrearage Carrying Costs
  - Write-offs

Project # Participants in Full PIPP

- Eligibility Definition
  - Number Eligible
- Participation Rate
- Cost adjustment based on comparison of characteristics

Participant Cost Estimate

- Adjusted Net Cost
- *
- Projected # of PIPP Participants

Ratepayer Cost Estimate

- Utility Cost Allocation Method
- Subsidy Cost Average & Distribution
- Analysis for each customer group
  - Eligible Nonparticipants
  - Low-Income Nonparticipants
  - Other Residential
  - Small Business

Data Collection & Analysis

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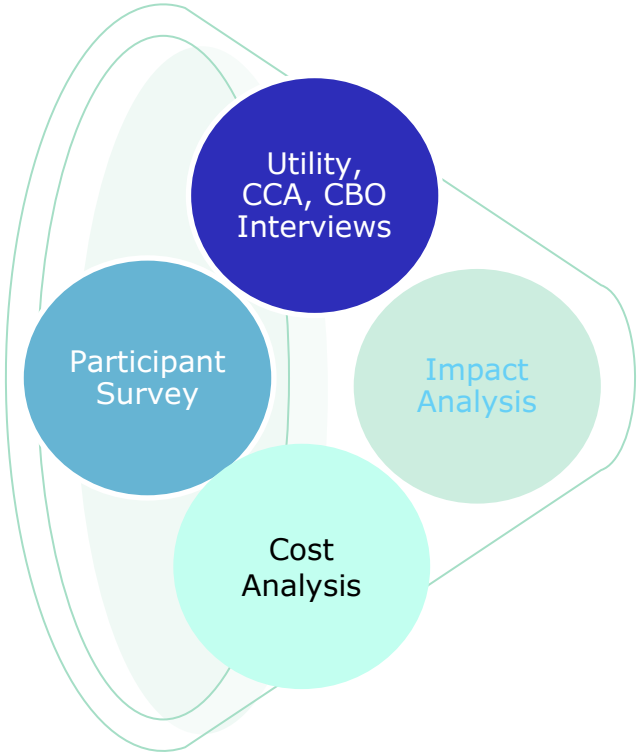
ANALYSIS TASKS - Synthesis



<u>Information from all research used to answer evaluation questions</u>

- Did the Pilot achieve the goals or show significant potential to achieve these goals?
- If there is potential with modifications, how should the long-term program designs be modified to best achieve the goals?
- Should the Pilot be modified to achieve the goals?
- Would setting program benefit caps advance the program goal of reducing disconnection rates, and if so, how should the caps be established?

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Discussion

Continuing the learning

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