



New Opportunities in Energy Efficiency for California's Low Income Families

The New Horizon: Charting a Course for Building Green Energy Economies

ACCES Symposium

March 19, 2009

Introduction

- Who is KEMA?
 - Since 1927, KEMA has specialized in business and technical consulting, operational support, measurement and inspection, and testing and certification
 - Our clients rely on KEMA for impartial, objective and expert consulting services to plan, build and maintain their strategies for growth in the energy sector
 - Our 1,800 energy specialists are engaged with more than 500 energy and utility clients in over 70 countries

Agenda

- Design and availability of new energy-related technologies and strategies targeting California's low income communities
- Discussion draws on:
 - CPUC Low Income Needs Assessment
 - California Energy Efficiency Strategic Plan
 - 2009-2011 California Energy-Related Programs Targeting Low Income Households (D.08-11-031)
 - American Recovery and Reinvestment Act

Low Income Needs Assessment

- Characterized and assessed the energy-related needs of California's low income population, including:
 - Identifying needs that are being met by existing programs,
 - Identifying service gaps not being addressed by existing programs, and
 - Identifying barriers that cause service gaps.
- Made recommendations on appropriate and effective methods for meeting energy-related needs in light of these barriers.

Needs Assessment Recommendations

- Focus on customers with high energy use, high energy burden (the ratio of their energy bills to income) and high energy insecurity (late payments, threatened service shut-off)
- Target households with special needs
 - Households with disabilities, large-sized families, rural/isolated communities
- Serve all eligible low income customers, and continue to implement measures that improve customer health, comfort and safety

California Energy Efficiency Strategic Plan

- *“Residential energy use will be transformed to ultra-high levels of energy efficiency resulting in Zero Net Energy (ZNE) new buildings by 2020. All cost-effective potential for energy efficiency, demand response and clean energy production will be routinely realized for all dwellings on a fully integrated, site-specific basis.”*
 - Holistic approach to addressing residential energy efficiency is key to many new technologies and strategies
 - ZNE example homes will include multifamily affordable housing

California Energy Efficiency Strategic Plan

- *“By 2020, 100 percent of eligible and willing customers will have received all cost-effective Low Income Energy Efficiency measures.”*
 - Effective outreach using targeting and segmentation techniques
 - Provides comprehensive energy efficiency and long term energy savings
 - Leverages other State, Federal and local programs
 - Integrates with core energy efficiency programs
 - Includes Workforce Education & Training (WE&T) efforts

D.08-11-031

- Approves California's statewide energy-related programs for 2009-2011 including Low Income Energy Efficiency Program (LIEE) and California Alternate Rate Program (CARE)
 - LIEE budget is almost \$1 billion
 - CARE budget is \$2.6 billion
- Goal is to provide LIEE measures and services to 25% of all eligible and willing customers in 2009-2011, and achieve 90% CARE penetration

2009 LIEE Targets

- \$240 million in program funding
- 300,000 households receiving LIEE measures (twice what has typically been achieved)

American Recovery and Reinvestment Act

- \$412 million in weatherization and energy efficiency funding for California
 - \$186 million for WAP (DOE)
 - \$226 for State Energy Program (CEC)
- Expected to cut energy bills for families and create nearly 100,000 jobs

American Recovery and Reinvestment Act

- WAP funding will allow energy efficiency upgrades of up to \$6,500 per home for eligible households
- State Energy Program will fund home energy audits and rebates for energy saving improvements, promotion of Energy Star products, and other innovative state efforts to help save families money on their energy bills.

2009 DOE/LIHEAP Targets

- Nearly \$500 million in funding expected in 2009 to fund LIHEAP and DOE weatherization, crisis heat & cooling measures, and utility cash assistance programs
- Nearly 500,000 households will be provided with services through these efforts in 2009
 - 100,000 weatherization
 - 11,000 crisis heating and cooling measures
 - 374,000 utility cash assistance

“Business-as-Usual” Won’t Cut It

- *“With 2009 funding at these levels, programs can no longer operate with a business-as-usual approach. Programs must evolve into resource programs that garner significant energy savings in our state while providing an improved quality of life for California's low income population.” (D.08-11-031)*
 - Aggressive promotion and targeted outreach
 - New technologies and strategies to help reduce and manage energy use
 - Significant coordination with other low income service providers and programs (e.g., CSD, local governments)

Areas of New/Expanded Emphasis

- Adopt "Whole Neighborhood Approach" to marketing and installation of LIEE measures
- Focus on customers with high energy use, burden and insecurity, but serve all eligible low income customers
- Continue to include measures that address customer health, comfort and safety
- Provide energy education services more closely linked with LIEE measure installations
- Coordinate statewide marketing program so it provides consistent and comprehensive message
- Enhanced outreach to persons with disabilities

Areas of New/Expanded Emphasis

- Promote relevant Workforce Education and Training (WE&T) to train the next generation of workers providing LIEE services
- Lighting measures and education services should consider new laws and rapidly changing market place
- Re-visit dwellings that had previously participated (2002 or earlier) to install new LIEE measures
- Install any/all measures with high energy savings potential (no longer limited by “3 measure rule”)
- Integrate with other IOU demand-side programs and other government/private programs

High Efficiency Furnace

- SoCalGas direct installation pilot for natural gas high-efficiency forced air unit furnaces
- Low income customers' homes whose space heating needs are at or above 300 therms for the winter season
- Total cost \$725,000

High Efficiency Clothes Washers

- PG&E direct installation program for high efficiency clothes washers
 - In comparison to standard models, estimated to save 259 kWh, 117 therms, and 7,000 gallons of water per year per machine
- Target low income households of five (5) or more residents
- Goal to install 1,000 units in 2009 utilizing a budget of \$750,000

Smart AC

- PG&E Demand Response program encourages reduced power usage during peak demand periods
 - One-time cash reward (\$25/unit)
 - Devices installed on central air conditioning units
 - Minimal impact on customer safety and comfort
- Marketing and outreach will target low income households with zero incremental cost

Programmable Controllable Thermostat

- SDG&E pilot designed to understand both demand response and energy efficiency whole-house solutions
- Programmable Controllable Thermostat (PCT) will be offered to 250 of SDG&E's low income customers
- Tests impact of appliances that are linked via a network device (the PCT)
- Targets households with electric consumption above 500 kWh per month
- Pilot cost \$230,000

In-Home Display

- SDG&E pilot offers in-home, digital displays that provide real-time energy use and billing information to qualified low income customers
- Expected to reach 300 customers with a budget of \$145,000
- Customer savings estimated at 10%-15% per month

Meals on Wheels Microwave Ovens

- PG&E to partner with Meals on Wheels to identify eligible low income customers
- Using microwave ovens to heat up frozen meals use up to 80% less energy than conventional ovens
- Targets elderly, homebound, frail and at-risk populations
- Goal to distribute 5,000 microwave ovens with budget of \$285,000

City of San Joaquin Partnership

- “City Rehabilitation Project” is a residential direct install pilot program in PG&E’s service territory
- Includes WE&T component (energy efficiency apprenticeships)
- ME&O activities tied to untapped local channels
- Budget \$410,000

Customer Rewards Programs

- SDG&E and SoCalGas pilot program rewards customers who achieve energy savings over the prior 12-month period
- Personalized recommendations developed from detailed energy audits
- Reward amount varies, provided as bill credit

One-E-App Pilot

- Center to Promote Health Care Access proposed a program to integrate CARE into the One-E-App system, a Web-based one stop eligibility system
- Complements current outreach and eligibility efforts in CARE and moves program toward automatic enrollment as required by SB 580

CSI Single Family Low Income Incentive Program

- Provides low-income homeowners in California access to subsidized solar photovoltaic systems, which decrease electricity usage and reduce bills without increasing monthly expenses
- Targets low income, single-family, owner-occupied homes
- Full subsidies provided for owners of housing financed through public housing assistance programs
- Expect 7,000 participants with budget of \$108 million

CSI Multifamily Affordable Solar Housing (MASH)

- Provides solar incentives to qualifying affordable housing multifamily dwellings.
- Managed by the PG&E, SCE, and The California Center for Sustainable Energy
- Incentives provided in two tracks:
 - Fixed incentives for solar PV systems offsetting common area and tenant loads
 - Higher incentives for systems providing “direct tenant benefits” (i.e., operating costs savings shared with tenants)

Moderate Income Weatherization Efficiency Program

- Statewide pilot program building on existing low income energy efficiency and weatherization programs
 - Integrates existing low income home energy efficiency and weatherization programs
 - Utilizes “whole neighborhood approach”
 - Reaches next tier of homeowners in need of major energy efficiency improvements
- Candidate communities may include: Eureka, Redding, Stockton, Oakland, San Francisco, Fresno, Visalia, San Bernardino, and San Diego



Questions? Thank you!

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