Final Report on Phase 2 Low Income Needs Assessment

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California Public Utilities Commission

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Final Report
September 7, 2007

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1. Executive Summary

1.1 Background

This report presents the findings of Phase 2 of the California Public Utilities Commission (the Commission) Low Income Needs Assessment Study. The needs assessment was conducted in two phases. Phase 1 was essentially a scoping study designed to direct the focus of the needs assessment, to identify data sources that can be used in the assessment of needs, and to design a means of collecting data that are not already available. Phase 2 has involved the execution of the needs assessment, including the analysis of existing data and the collection and analysis of additional primary data.

1.2 Phase 2 Objectives and Tasks

The principal objectives of Phase 2 were to:

- Characterize and assess 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.
- Make recommendations on appropriate and effective methods for meeting energy-related needs in light of these potential barriers.
- Develop baseline estimates of the potential for CARE and LIEE, as well as methods for tracking changes over time.

To address these objectives, the following data collection and analysis tasks were implemented as part of Phase 2:

- Census data collection and analysis
- Onsite survey data collection and analysis
- Analysis of program eligibility, penetration and potential
- Segmentation analysis

Each of these tasks is described in detail in Section 3. Subsequent sections of this report include the detailed results of the characterization analysis (Section 4), a comprehensive summary of the results of the

needs assessment (Section 5), the results of the analysis of energy savings potential for the LIEE Program (Section 6), and a set of recommendations for program targeting, outreach, design, and delivery (Section 7). These recommendations have been developed based on the results of a segmentation analysis, as well as the findings from the characterization, needs assessment, and energy savings potential analyses presented in Sections 4 through 6. Finally, we conclude with Section 8, which provides a summary of the methods developed as part of this study to update eligible population estimates and track energy savings potential over time.

1.3 Summary of Key Findings and Recommendations

The needs assessment was designed to answer the following questions:

- How many households are eligible for CARE and the LIEE Programs?
- How many households are enrolled in CARE and have recently participated in LIEE?
- What is the remaining potential for CARE?
- What LIEE measures are needed among eligible households?
- What is the available energy savings potential from LIEE?
- Are the programs reaching the appropriate targets? Are there significant under- or over-served segments?
- Are the programs achieving maximum potential? What strategies should be used toward this end?
- Is there adequate coordination among the IOUs, SMJUs, municipal utilities and other (non-regulated) energy service providers?

The results of the needs assessment suggest that, over time, the programs have effectively targeted and provided services to low-income households that have the greatest need. As of year-end 2006, however, there remains significant untapped potential in terms of the number of eligible households not enrolled in CARE and the number of households for which LIEE measures would be technically feasible, applicable and needed.

1.3.1 How many households are eligible for the CARE and LIEE Programs?

As shown in Table 1-1, one in three of California's households (33%) qualified for the CARE and LIEE Programs in 2006. That is, nearly 4 million households out of a total 2006 statewide population estimate of just over 12 million households.

Table 1-1
Estimates of CARE and LIEE Program Eligibility (2006)
(Statewide and by IOU/Commodity)

	Total Households Technically Eligible for CARE [1]	CARE Eligible Households (200%)	Percent CARE Eligible (200%)	Total Households Technically Eligible for LIEE[1]	LIEE Eligible Households (200%)	Percent LIEE Eligible (200%)
Statewide	**12,192,996**	**4,012,010**	**33%**	**12,192,996**	**4,012,010**	**33%**
IOU (Commodity)						
PG&E (electric and gas)	3,160,349	870,432	28%	3,160,349	870,432	28%
PG&E (electric only)	1,341,454	463,571	35%	1,443,690	504,540	35%
PG&E (gas only)	847,735	267,235	32%	1,533,468	493,622	32%
SCE	4,240,631	1,351,845	32%	4,271,645	1,365,633	32%
SCG	5,267,327	1,762,569	33%	5,826,634	2,005,118	34%
SDG&E (Electric)	1,203,806	335,015	28%	1,343,769	394,242	29%
SDG&E (Gas)	831,970	233,302	28%	1,045,003	322,179	31%

[1] Technical eligibility distinguishes individually metered from sub-metered/subunit households. CARE and LIEE programs have different requirements with regard to sub-metered households (i.e., sub-metered households are eligible for CARE, whereas LIEE requires that 80% of the units in a sub-metered property must be income eligible in order to qualify for the program).

1.3.2 How many households are enrolled in CARE and have recently participated in LIEE?

Table 1-2 displays estimates of CARE and LIEE Program penetration. For CARE, year-end 2006 penetration ranged from 66% for SDG&E to 78% for SCE. Annual penetration for LIEE ranged from 2-4%, which is consistent with prior years.

Table 1-2
Estimates of Annual CARE and LIEE Program Penetration (2006)
(2006, by IOU)

	CARE Eligible Households (200%)	CARE Participants	**Annual CARE Penetration**	LIEE Eligible Households (200%)	LIEE Participants	**Annual LIEE Penetration**
PG&E	1,601,238	1,133,663	**71%**	1,868,594	58,250	**3%**
SCE	1,351,845	1,055,710	**78%**	1,365,633	53,004	**4%**
SCG	1,762,569	1,264,264	**72%**	2,005,118	36,852	**2%**
SDG&E [1]	335,015	220,010	**66%**	394,242	13,965	**4%**

[1] SDG&E CARE penetration estimate is based on the electric tariff counts of CARE participants and the electric service counts of CARE eligible households.

1.3.3 What is the remaining potential for CARE?

Table 1-3 shows the number of eligible households not enrolled in CARE at year-end 2006. As shown, nearly 500,000 eligible households in SCG's service area and another 500,000 eligible households in PG&E's service territory were eligible but not enrolled in CARE in 2006. Nearly 300,000 SCE customers and just under 115,000 SDG&E customers were eligible but not enrolled in CARE in 2006.

Table 1-3
Eligible Households Not Enrolled in CARE (2006)

IOU	**Number of Eligible Households Not Enrolled in CARE (2006)**
PG&E	464,359
SCE	297,406
SCG	493,519
SDG&E	113,905

1.3.4 What LIEE measures are needed among eligible households?

Table 1-4 shows the number of households where there is a need for LIEE measures that would be technically feasible and applicable to install. As shown, CFLs, faucet aerators, water heater pipe wrap and blankets, and weatherstripping were among the most commonly applicable and needed measures. Measures that were applicable and/or needed least often include central AC replacements, water heater replacements, duct testing & sealing measures, and furnace replacements.

Table 1-4
Number of Eligible Households Where LIEE Measures are Applicable and Needed (2006)

Measure	Number of Eligible Households Where LIEE Measures Applicable and Needed (2006)
CFLs	3,661,557
Faucet Aerators	2,293,503
Water Heater Pipe Wrap	2,253,266
Weatherstripping	2,213,029
Water Heater Blankets	2,052,081
Refrigerator Replacement	1,368,054
Low Flow Showerhead	1,327,817
Hardwired Porch Light Fixture	1,247,343
Ceiling Insulation	1,166,870
Caulking	1,086,396
Room AC Replacement	519,056
Furnace Repair	511,008
Evaporative Cooler Replacement	321,895
AC or Evaporative Cooler Cover	241,421
Furnace Replacement	160,948
Duct Testing & Sealing	120,711
Water Heater Replacement	40,237
Central AC Replacement	8,047

1.3.5 What is the available energy savings potential from LIEE?

The needs assessment determined that 584 GWh and 84 Mth in energy savings potential is available from eligible households who would be willing to participate in the LIEE Program. For electricity, the measures with the largest available energy savings potential are CFLs, replacement refrigerators, and ceiling insulation. Measures with the largest available natural gas savings potential include ceiling insulation and water heater tank wraps. Figures 1-1 and 1-2 present the share of total available electricity and natural gas savings potential by end-use.

Figure 1-1
Percentage of Available Electricity Savings Potential, by End-Use

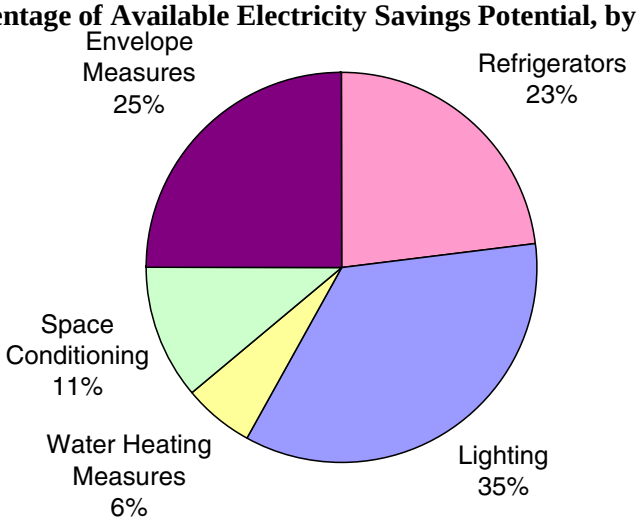
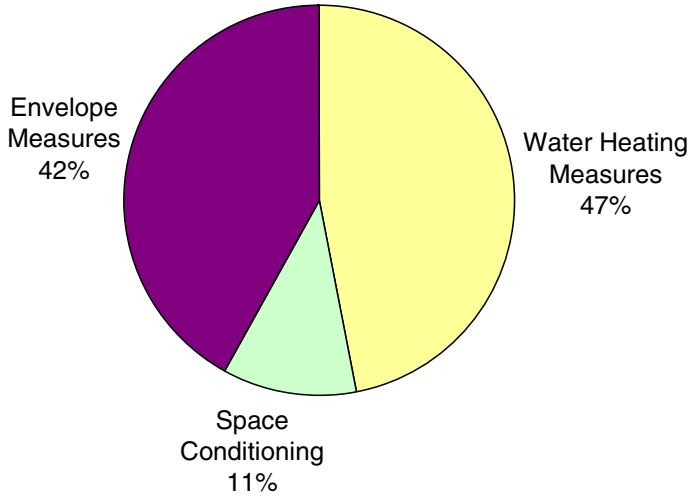


Figure 1-2
Percentage of Available Natural Gas Savings Potential, by End-Use



1.3.6 Are the programs reaching the appropriate targets? Are there significant under- or over-served segments?

Generally, the results of the needs assessment suggest that the programs have effectively targeted and provided services to low-income households that have the greatest need. The outreach and delivery channels have been effective in addressing the wide range of characteristics exhibited in the population. There are few, if any, geographic or demographic groups that have been missed or overlooked. And, participation does not appear to be overextended to one particular group.

Recommendations:

- *Continue to actively recruit and enroll households in areas were the programs have already had success.* The needs assessment indicated that eligible households not currently enrolled in the programs exhibit the same (or similar) characteristics as those households who have already or are currently participating (e.g., Hispanic households, larger families, and households with limited educational backgrounds). The programs, should continue – and aggressively expand – efforts to target these types of low-income households as they represent those with the greatest need and interest in participating.

- *In addition, efforts to increase penetration within these demographic groups should require little modification to the existing outreach and delivery channels.* The programs have been successful in reaching low-income households through channels they frequently access and, potentially, even more effective at engaging local resources to more cost-effectively reach and deliver program services. The utilities should continue to use bill inserts and other direct mail efforts to raise awareness and continue to promote the programs via non-English media sources (e.g., TV, radio and/or newspapers written in non-English languages). The utilities should continue their work with local, community-based organizations and government agencies to cost-effectively generate qualified and quality leads for the programs.

1.3.7 Are the programs achieving maximum potential? What strategies should be used toward this end?

While penetration rates for CARE were fairly high under the prior eligibility standards, the new standards leave substantial room for expansion. In addition, there is significant untapped potential for LIEE. The needs assessment has developed a number of recommendations that should be considered to ensure that, going forward, the program continues to successfully address the needs of low-income households for whom the programs would provide the greatest benefit.

Recommendations:

- *More aggressive strategies are needed to achieve higher penetration in areas where there do not appear to any unique challenges to expanding participation.* Eligible households from areas such as San Diego County and the Central Valley region (climate zone 12 in particular) exhibit many of the same characteristics as participating households, they have the same level of need, are willing to participate, and are easily accessible through existing outreach and delivery channels. Yet, penetration levels in these areas are not as high as they appear they could be. The needs assessment did not reveal any obvious reasons or explanations for why participation appears to be lagging in these areas. This is not meant to be a criticism of the efforts undertaken to encourage participation in these areas (or others with similar characteristics). Rather, we are suggesting that more aggressive efforts and strategies are likely to be successful in achieving higher penetration.

- *Expand efforts to target households with special needs and African-American households.* The needs assessment indicated that eligible households with disabilities and African-American households demonstrate significant need for the programs' services and would be willing and relatively straightforward to recruit. However, participation from these segments appears to be lagging behind need and, as such, more aggressive efforts to target these important groups should be pursued.

- *Recognize and encourage increased participation from large-sized families.* These households have limited household resources (which are stretched across many household members) and other important burdens and responsibilities (e.g., caring for elderly family members, raising children). As such, the programs should be credited for the efforts to assist these families and continue to find new and innovative ways to serve these important members of the low-income population.

- *Develop creative efforts to increase participation in remote areas and "needle in the haystack" areas.* "Needle in the haystack" areas are moderate to heavily populated areas where the incidence of low income households is relatively low. Other than where they live and how difficult (expensive) it would be to find them, we do not see any unique characteristics in these households that would indicate they are not interested in participating or would not benefit from the programs' services. However, the existing outreach and delivery efforts do not appear to have been as effective in generating participation from within these isolated areas. We recommend the Commission work the utilities, local governments, and the relevant community-based organizations to develop creative and cost-effective channels through which locate eligible households from these areas.

- *Target high consumption households.* Use annual energy consumption metrics, as well as seasonal and above-baseline benchmarks, to develop targeted marketing lists for CARE and LIEE recruitment efforts. There are many low-income households that are not currently enrolled in CARE that use considerably higher amounts of energy (both electricity and natural gas). These nonparticipating households also exhibit high seasonal (winter and summer) and above-baseline consumption patterns. The utilities should use the results of the needs assessment to develop the appropriate criteria for these metrics (e.g., above 1,500 kWh during the winter months), and then develop recruitment lists to proactively target nonparticipating households who meet these criteria. The Commission should require the utilities to report how many households are participating that meet or exceed these criteria.

- *Target high-benefit LIEE measures.* Continue to target housing characteristics for which the LIEE Program can provide the greatest benefit. The needs assessment analysis has identified many features of low-income housing that should (continue to) be targeted as they represent the most substantial opportunity for energy savings through the LIEE Program.

- *Continue to look for ways to simplify/streamline the application process.* Many households who are eligible for CARE and LIEE are already aware that the programs exist, but they are unwilling to participate because of what they find to be real (not just perceived) barriers to participation. These households feel the applications are confusing, that it is difficult to apply, and that it takes too long to get the services from these types of programs. The Commission should review the success the utilities have been having with some of the application processing changes initiated through the 2005-2006 Winter Initiative (e.g., qualification based on neighborhood, automatic enrollment in LIEE if eligible for CARE, etc.). Areas with the greatest success should be expanded.

- *Some barriers simply cannot be overcome and resources may be better spent elsewhere.* The programs should make every effort to make sure all households eligible for these programs are aware of them, that they clearly understand what is and is not required of them to qualify, and they understand how and why they are being asked to participate. If a household is still unwilling or unable to comply with the requirements and/or are otherwise not interested in participating, then program outreach specialists should move on as it is likely that there are others who would be better served.

1.3.8 Is there adequate coordination among the IOUs, SMJUs, municipal utilities and other (non-regulated) energy service providers?

The needs assessment indicates that there is room for improved coordination in areas served by more than one utility, as well as areas where a considerable number of eligible households use non-regulated fuels for space heating and water heating. The following recommendations are provided to ensure that, going forward, the program continues to successfully address the full spectrum of energy-related needs of low-income households.

Recommendations:

- *Encourage coordination among IOUs, SMJUs, municipal utilities, and other energy service providers.* The needs assessment indicates that there is considerable room for improved coordination in areas served by more than one utility. Key areas include Los Angeles and Sacramento Counties, where eligible households receive overlapping services provided by the IOUs and large municipal utilities (LADWP and SMUD, respectively). In addition, improved coordination should be encouraged in less populated areas with overlapping services provided by IOUs and SMJUs. In addition, coordination among IOUs with overlapping service territory – e.g., Orange, King and Kern. We recommend that the Commission require each IOU and SMJU to document its efforts to encourage coordination among all relevant energy utilities in the areas they serve.

- *Investigate opportunities in non-regulated energy service providers (e.g., propane distributors/equipment sales).* Because eligible households can use non-regulated fuels for space heating and water heating, there are likely to be challenges to delivering comprehensive services through the IOU and SMJU LIEE Programs. There may not be much that the Commission can require the utilities to do here. However, if we use the example of water utilities coordinating with the IOUs to deliver complementary program services, we see that there could be opportunities worth exploring. The Commission should investigate the extent to which local distributors and contractors would be willing to participate in the LIEE Program and provide support for the delivery of weatherization and other types of relevant measures.