Application No: A.14-11-
Exhibit No:
Witness: Aguirre, Mark
Witness: Yao, High

Application of Southern California Gas Company (U904G) for Approval of Low-Income Assistance Programs and Budgets for Program Years 2015-2017	Application 14-11-____ (Filed November 18, 2014)

PREPARED DIRECT TESTIMONY OF
MARK AGUIRRE AND HUGH YAO

(ERRATA)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

November 18, 2014

field and office personnel and field equipment. As a result, SoCalGas' ESA Program had difficulty recovering from the effects of this interruption in Program continuity. SoCalGas believes that the proposals presented in this Application for PY2015-2017 will help SoCalGas meet its annual homes treated goal with the intent of making progress towards the 2020 programmatic initiative.

6. Unique Factors: *Discuss unique issues in your utility's service area that would make 100 percent penetration challenging and also discuss homes projected but not reached in the 2012-2013 PYs.*

SoCalGas recognizes that, despite its efforts, there are certain factors unique to SoCalGas' territory and status as a gas-only utility that present challenges to achieve 100% penetration. Foremost among these is SoCalGas' lack of electric measures that may be more easily identified and more valued by customers. Customers' gas bills are often substantially lower than electric bills, leading to lower customer motivation and understanding to improve gas EE, and resulting in less interest in SoCalGas' ESA Program. Electric companies also have "Simple Measures" that may be installed at the time of the in-home assessment for qualified customers and contribute to meeting the 3MM required to treat homes. SoCalGas also operates in one of the largest, most geographically diverse territories and faces challenges in reaching remote and rural locations.

Paramount among SoCalGas' goals is the achievement of cost effective, long-lasting energy savings. Based on the proposed measure portfolio and treated unit goals, SoCalGas expects savings of almost 200 million therms in the 2015-2017 cycle, as shown in Table 3, below.

Table 3: Estimated Therm Savings 2015-2017

Year	First Year Therm Savings	Lifecycle Therm Savings
2017	~~6,229,850~~ 5,007,884	~~67,021,526~~53,173,885
2016	~~6,229,850~~4,977,996	~~67,021,526~~52,587,406
2015	~~4,627,547~~3,375,693	~~50,998,496~~36,564,376
2014	2,426,915*	26,749,115**
2013	3,096,500	34,129,187
2012	999,408	15,403,825

* Value shown represents the estimated energy savings for Program Year 2014 associated with the requested funding in Application (A.) 11-05-018. Funding was increased pursuant to D.11-08-044, which did not contain an associated upward energy savings estimate.
**Value shown is an estimate based on ratio of 2013 and 2014 therm savings.

Based on the forecast energy savings, SoCalGas' portfolio scores on the two adopted cost effectiveness tests for 2015-2017 are as presented in Table 16:

Table 16: SoCalGas Portfolio Test Cost-Effectiveness for 2015-2017

	Ratio of Program Benefits over Program Costs	
	Energy Savings Assistance Program Cost Effectiveness Test (ESACET)	**Resource Measures Only Total Resource Cost Test (Resource TRC)**
PY 2012	0.68	0.24
PY 2013	0.72	0.43
PY 2014		
PY 2015	~~0.86~~ 0.77	~~0.52~~0.40
PY 2016-2017	~~1.08~~0.89	~~0.67~~0.57

Table 16 above shows the forecasted ESACET and Resource TRC for years 2015 and 2016-2017. These tests were also calculated for 2012 and 2013, since these are the two most recent years that have complete data available. These years are included to provide a comparison. The Resource TRC almost doubled from 2012 to 2013 and the forecasts show a slight decrease in 2015 and an increasing trend from 2015~~3~~ to 2016-2017. The ESACET shows an increasing trend through to program years2016-2017. Years 2016 and 2017 have identical measure installation forecasts and only differ by costs due to inflation.

SoCalGas believes these are acceptable cost-effectiveness test results, since it is demonstated that the program portfolio is increasingly becoming more and more cost-effective. Also, the current modeling underestimates some non-energy benefits for various reasons. Non-energy benefits are only attributed to measures that also have therm savings. For example, non-FAU furnaces that are repaired/replaced receive zero therm savings and therefore zero non-energy benefits. However, repairing or replacing a non-workable furnace is providing a customer with better health, safety and comfort. Another example is that water saving measures are underestimated due to incomplete water measure information in the model. SoCalGas, along with the other IOUs, have proposed to conduct an EM&V study on updating the non-energy benefits modeling. SoCalGas is confident that once that model is updated, the cost-effectiveness test results will be higher.

The cost-effectiveness test results in Table 13 were calculated using the latest E3 Calculator. SoCalGas notes that the E3 Calculator available for purposes of this filing contain

an outdated version of the after-tax Weighted Average Cost of Capital ("WACC") of 7.38% as the discount rate, which understates the results. The currently authorized WACC for SoCalGas is 8.02% per D.12-12-034, resulting in an after-tax WACC of 6.95% (after adjustments for federal and state tax rates). If SoCalGas were to substitute the current and lower after-tax WACC, the proposed portfolio would reflect a higher cost-effectiveness. The test results using 6.95% as the discount rate in the E3 Calculator are provided below in Table 17. Both the ESACET and Resource TRC test results for program years 2015 and 2016-2017 are slightly higher when using the current discount rate of 6.95%. Please see the testimony of Mr. Rendler for further discussion requesting the Commission update the cost-effectiveness models with this more current information and for consistency.

Table 17: Portfolio Test Cost Effectiveness for 2015-2017
(Using Authorized 6.95% Discount Rate)

	Ratio of Program Benefits over Program Costs	
	Energy Savings Assistance Program Cost Effectiveness Test (ESACET)	**Resource Measures Only Total Resource Cost Test (Resource TRC)**
PY 2012	0.68	0.24
PY 2013	0.72	0.43
PY 2014		
PY 2015	~~0.87~~0.78	~~0.53~~0.41
PY 2016-2017	~~1.10~~0.90	~~0.69~~0.58

Note: 2012 and 2013 numbers do not change from Table 13 because the tests were not re-run for thsese years as they are final.

2. 2012-2014

Specifically discuss the results of the ESA Program efforts, cost effectiveness and energy savings, accomplished during the 2012-2014 program cycle.

Table 18 below presents SoCalGas' homes treated and therms saved from program cycle 2012-2014.

Table 19: 2016-17 Measure Highlights

Measure	2016 First Year Therms Saved*	EUL	Provides Water Savings
Thermostatic Tub Spout	2,135,197	10	X
Thermostatic Shower Valve	~~1,592,914~~298,105	10	X
Faucet Aerator	749,572	10	X
HE Clothes Washer	655,428	11	X
Air Sealing	370,664	11	
Low-Flow Showerhead	234,250	10	X
Furance Clean & Tune	213,084	5	
Attic Insulation	178,758	20	
HE FAU Furnace	100,724	20	
Duct Seal & Testing	14,579	18	
Water Heater Blanket	11,284	~~7~~ 3.7	X
Water Heater Pipe Insulation	7,526	11	X
Water Heater Repair & Replace	6,516	11	X
FAU Standing Pilot Light Conversion	2,310	~~13.3~~ 6.7	
Non-FAU Furnace Repair & Replace	0	20	

*Note tht 2016 and 2017 have the same number of measure installations and therefore have the same forecasted first year therms saved.

Table 19 above shows that the majority of measures either prove to provide significant therm savings, significant non-energy benefits and/or save water. The only measure that does not show any of these benefits in Table 15 is replacing non-workable furnaces with non HE FAU furnaces. This will only be done when installing an HE FAU furnace is not an option. This measure does provide health, safety and comfort benefits to the customer by permitting them to be able to use heat when needed. These non-energy benefits are not calculated in the current model because this measure claims zero therm savings. This measure also has the benefit of a long EUL of 20 years.

New Measures

- *Identify new measures that are being proposed for the 2015-2017 program cycle, with the relevant cost effectiveness ratios or justification for deviations as described above.*

- *Provide justification for why such measures should be included in your ESA program portfolio.*

SoCalGas proposes the following new measures that meet the Commission's criteria:

Thermostatic Tub Spout

The thermostatic tub spout is expected to launch mid-year 2015. The technology is similar to the thermostatic shower valve measure that was introduced into SoCalGas' measure mix in the 2012-2014 Programs cycle. The thermostatic tub spout is like the thermostatic shower valve in that it reduces hot water flow from a tub spout to a trickle when the water reaches a specific temperature. The thermostatic tub spout will fill a needed gap for users that run water through the tub spout for shower warm ups. In addition, there is an added benefit in that it has an anti-leak tub spout diverter that eliminates leaks while the user is showering.
Although the thermostatic tub spout is not yet commercially available, SoCalGas felt it was important to include it in its measure mix due it its water saving benefits. ~~As shown in Table 16 above, T~~this measure has a high ESACAT of 2.04 for MF and 1.80~~94~~ for SF and MH in 2016-17and a first year energy savings of ~~532,894~~2,135,197 therms in 2016. Since it is expected to be launched in 2015, SoCalGas did not want to lose an opportunity to include this water saving measure for its 2015-2017 program years with the renewed focus on water conservation due to the statewide drought.

SoCalGas recognizes the potentially significant energy and water savings from the thermostatic tub spout and its importance in addressing the drought. It also believes that the realization of benefits from this measure should not be delayed. Therefore, to the extent the thermostatic tub spout technology becomes commercially available prior to the Commission issuing a decision on SoCalGas' 2015-2017 application, SoCalGas would like to request adding this measure to its current program cycle measure mix through an Advice Letter.

HE FAU Furnace Measure

SoCalGas is proposing to include HE FAU Furnaces as a measure for certain end-use applications[92]. SoCalGas believes that HE FAU Furnaces as a technology has matured

[92] SoCalGas is also proposing that HE Furnaces not be subject to the cap on home repairs in Table 6-1 of the P&P Manual since the established limit for Central Furnaces would preclude installation of the HE Furnace measure due to its higher cost.

Although some of the results were inconsistent, SoCalGas was able to draw some conclusions based on the input received to assess the impact to its ESA Program budget. Survey results demonstrate that there is the belief that there are no offsetting cost savings associated with implementing a prevailing wage and that, in addition to paying higher wages, there is an increase in administrative burden in tracking, managing and reporting prevailing wage information. Contractors also stated that these additional costs could not be asorbed and that the increase would need to be included in the reimbursement rates SoCalGas pays its contractors. Based on the input it received from contractors in its survey, SoCalGas estimates that the additional budget required to facilitate a prevailing wage is $~~79~~ 80 million for program years 2015-2017. The resultant impact to SoCalGas' program cost-effectiveness is a decrease in the Cycle 2016-2017 ESACET test from ~~1.05~~0.89 to ~~0.89~~0.70. If SoCalGas were directed to facilitate a prevailing wage, it would need six months to implement which would include determining new reimbursement rates and adjusting its service agreements with contractors.

As stated in the Testimony of SoCalGas witness Mr. Rendler, SoCalGas does not believe action should be taken at this time with respect to this consideration absent additional research and evaluation that could warrant establishment of prevailing wage conditions.

d) C areer pipeline

SoCalGas supports the development of career pathways for workers currently employed by ESA Program contractors. SoCalGas' contractor network recruits the majority of its labor resources from the local areas it services, including the low income communities within its service territory. SoCalGas proposes to continue to encourage contractors to recruit from low income areas and seek employees from the displaced workforce population. It will also continue to promote programs to prepare the ESA Program workforce and to recruit and train residents of disadvantaged, low income communities to install energy efficiency measures. SoCalGas has already been successful increasing the technical expertise of its installation crews through its NGAT training. SoCalGas will continue to support career paths and career ladders from basic skill level jobs such as weatherization installation to advance skill level jobs such as HVAC technician, Home Energy Rating System ("HERS") Rater and/or Energy Inspector through its Contractor Network.

In support of the UCB-DVC recommendation issued in the Guidance Plan in May 2014 to develop a career pipeline for workers currently employed in the ESA Program, SoCalGas

Table 27 - In Home Education

	2012-2014 Historical				2015 - 2017 Proposed			
	2012	2013	2014	Total	2015	2016	2017	Total
Authorized	$ 2,569,098	$ 2,517,646	$ 2,531,192	$ 7,617,936	$ 3,633,788	$ 3,714,821	$ 3,798,033	$ 11,146,642
Actual [1]	$ 1,375,948	$ 1,586,948	$ 1,464,159	$ 4,427,055				

[1] Year 2014 represents forecasted estimate.

The In-Home Education budget category includes the cost of fees paid to contractors for education activities as well as the cost of energy education related materials. In addition to the ongoing printing costs for the energy education guide, the 2015-2017 proposed budget includes costs for new materials discussed above at sections II.C.1.a, II.C.3.d, and II.C.3.e including coloring books, bookmarks, shower timers, Toilet Tank Efficiency Kits, and green totes.

Table 28 - Training Center

	2012-2014 Historical				2015 - 2017 Proposed			
	2012	2013	2014	Total	2015	2016	2017	Total
Authorized	$ 535,360	$ 663,921	$ 681,105	$ 1,880,386	$ 986,832	$ 885,711	$ 908,314	$ 2,780,857
Actual [1]	$ 280,456	$ 292,165	$ 291,117	$ 863,737				

[1] Year 2014 represents forecasted estimate.

The Training Center budget category includes labor and nonlabor costs related to training and auditing of contractor activities. ~~Continuing~~ Nonlabor activities were estimated based recent quotes and expenditures for specific services, and anticipated levels of activity for 2015, escalated to 2015-2017 dollar terms for inflation as necessary.~~on the five-year 2009-2014 average expenditures, adjusted for inflation.~~ In addition, the budget includes provision for the following new activities:

1. Training facility $184,050 over the period 2015-2017
2. Assessment training video development $110,000
3. Computer based training tool $30,675
4. One additional staff member to augment SoCalGas' contractor training and auditing capacity.

Table 29 - Inspections

	2012-2014 Historical				2015 - 2017 Proposed			
	2012	2013	2014	Total	2015	2016	2017	Total
Authorized	$ 3,168,321	$ 3,263,371	$ 3,361,051	$ 9,792,743	$ 2,256,181	$ 2,306,256	$ 2,357,651	$ 6,920,088
Actual [1]	$ 1,702,444	$ 1,909,890	$ 2,107,486	$ 5,719,820				

[1] Year 2014 represents forecasted estimate.

requirements, the development of ESA Program regulatory filings, monitoring and evaluation of financials in compliance with established budgets, and responding to data requests from the Commission and other outside agencies and organizations, among other duties.

This increase compared to the previous program years is to reflect the reorganization that was performed in PY2012. The reorganization was previously described to the Commission in connection with the 2012 GRC and was performed to enable SoCalGas management to focus on the specific challenges facing our business. As a result, a dedicated regulatory compliance team was established to support SoCalGas low-income programs. This is reflected in the difference between authorized historical expenses shown above. SoCalGas proposes to add the incremental labor of approximately $130,000 in 2015 dollars (allocated between the ESA and CARE Programs) reflecting the filling of positions associated with performing this function.

Table 33 - General Administration

	2012-2014 Historical				2015 - 2017 Proposed			
	2012	2013	2014	Total	2015	2016	2017	Total
Authorized	$ 5,193,381	$ 5,547,442	$ 5,286,041	$ 16,026,864	$ 5,423,125	$ 5,520,021	$ 5,291,513	$ 16,234,658
Actual [1]	$ 4,243,337	$ 4,911,594	$ 4,257,588	$ 13,412,519				

[1] Year 2014 represents forecasted estimate.

The General Administration budget category records labor and nonlabor costs associated with the general management and administration of the program including operation of the ESA Program call center, invoice processing, management of contractor field activities and installation standards, project management and analysis of the CARs organization, information systems maintenance and development, contract administration and program data analysis.

Continuing nonlabor activities were estimated based on the five-year 2009-~~2014~~ 2013 average expenditures, adjusted for inflation. The 2015-2017 General Administration budget reflects removal of labor costs associated with 6.72 full time equivalent ("FTE") staff members reclassified under the Marketing and Outreach category which more appropriately reflects the activities of those staff members.

Compared with 2013 actual labor costs, an additional 4.53 FTE are included to account for the backfill of 2013 vacancies; in addition, new forecast labor costs for 3.25 FTEs are included to support SoCalGas' emphasis on multifamily strategy described elsewhere in this testimony including at section II.C.3.j and other initiatives.

Exhibit 2: ESA Program Measures & Associated First Year Therm Savings

Energy Efficient Measure	**First Year Therm Savings**
Air sealing, MF, 4	10.14
Air sealing, MF, 5	10.56
Air sealing, MF, 6	0.27
Air sealing, MF, 8	0.70
Air sealing, MF, 9	0.76
Air sealing, MF, 10	6.26
Air sealing, MF, 13	12.46
Air sealing, MF, 14	15.63
Air sealing, MF, 15	0.30
Air sealing, MF, 16	5.00
Air sealing, MH, 4	10.51
Air sealing, MH, 5	9.93
Air sealing, MH, 6	11.90
Air sealing, MH, 8	0.64
Air sealing, MH, 9	1.87
Air sealing, MH, 10	12.32
Air sealing, MH, 13	11.10
Air sealing, MH, 14	13.98
Air sealing, MH, 15	0.00
Air sealing, MH, 16	13.93
Air sealing, SF, 4	10.40
Air sealing, SF, 5	10.25
Air sealing, SF, 6	0.55
Air sealing, SF, 8	0.68
Air sealing, SF, 9	0.96
Air sealing, SF, 10	5.27
Air sealing, SF, 13	11.36
Air sealing, SF, 14	14.40
Air sealing, SF, 15	0.00
Air sealing, SF, 16	5.34
Attic insulation, MF, 4	2.58
Attic insulation, MF, 5	2.58
Attic insulation, MF, 6	27.91
Attic insulation, MF, 8	27.92
Attic insulation, MF, 9	28.05
Attic insulation, MF, 10	24.08
Attic insulation, MF, 13	22.04
Attic insulation, MF, 14	4.37

Attic insulation, MF, 15	4.37
Attic insulation, MF, 16	4.37
Attic insulation, SF, 4	10.52
Attic insulation, SF, 5	23.30
Attic insulation, SF, 6	28.28
Attic insulation, SF, 8	28.01
Attic insulation, SF, 9	27.70
Attic insulation, SF, 10	25.99
Attic insulation, SF, 13	22.74
Attic insulation, SF, 14	21.79
Attic insulation, SF, 15	32.93
Attic insulation, SF, 16	25.83
Duct sealing and testing, MF, All	0.00
Duct sealing and testing, MH, All	5.47
Duct sealing and testing, SF, All	15.42
FAU standing pilot light conversion, MF	42.00
FAU standing pilot light conversion, MH	42.00
FAU standing pilot light conversion, SF	42.00
Furnace clean and tune, MF, 4	2.10
Furnace clean and tune, MF, 5	2.10
Furnace clean and tune, MF, 6	2.10
Furnace clean and tune, MF, 8	2.10
Furnace clean and tune, MF, 9	2.10
Furnace clean and tune, MF, 10	3.00
Furnace clean and tune, MF, 13	3.00
Furnace clean and tune, MF, 14	3.00
Furnace clean and tune, MF, 15	1.40
Furnace clean and tune, MF, 16	1.40
Furnace clean and tune, MH, 4	3.70
Furnace clean and tune, MH, 5	1.91
Furnace clean and tune, MH, 6	0.00
Furnace clean and tune, MH, 8	12.54
Furnace clean and tune, MH, 9	11.42
Furnace clean and tune, MH, 10	0.00
Furnace clean and tune, MH, 13	0.00
Furnace clean and tune, MH, 14	0.00
Furnace clean and tune, MH, 15	25.48
Furnace clean and tune, MH, 16	0.20
Furnace clean and tune, SF, 4	2.10
Furnace clean and tune, SF, 5	0.00
Furnace clean and tune, SF, 6	12.89

Furnace clean and tune, SF, 8	11.68
Furnace clean and tune, SF, 9	11.34
Furnace clean and tune, SF, 10	5.47
Furnace clean and tune, SF, 13	0.00
Furnace clean and tune, SF, 14	0.00
Furnace clean and tune, SF, 15	24.35
Furnace clean and tune, SF, 16	9.06
HE Clothes washer, MF	30.88
HE Clothes washer, MH	30.88
HE Clothes washer, SF	30.88
Heating system, MF, All	0.00
Heating system, MH, All	0.00
Heating system, SF, All	0.00
Low Flow Shower Head, MF, 0	0.93
Low Flow Shower Head, MH, 0	1.18
Low Flow Shower Head, SF, 0	1.70
~~Thermostatic Shower Valve, all, 0~~	~~13.60~~
Thermostatic Shower Valve, MF, 0	1.02
Thermostatic Shower Valve, MH, 0	1.34
Thermostatic Shower Valve, SF, 0	2.87
Water Heater Blanket, MF, 0	1.20
Water Heater Blanket, MH, 0	1.78
Water Heater Blanket, SF, 0	2.62
Water Heater Pipe Insulation, MF, 0	0.95
Water Heater Pipe Insulation, MH, 0	1.41
Water Heater Pipe Insulation, SF, 0	2.08
Water heater repair and replace, MF, 0	0.00
Water heater repair and replace, MH, 0	3.52
Water heater repair and replace, SF, 0	3.52
Faucet Aerator, MF, 0	2.00
Faucet Aerator, MH, 0	2.83
Faucet Aerator, SF, 0	3.97
Thermostatic Tub Spout, MF	35.00
Thermostatic Tub Spout, SF	22.00
Thermostatic Tub Spout, MH	22.00
HE FAU Furnace, MF, 8	7.97
HE FAU Furnace, MF, 9	13.50
HE FAU Furnace, MF, 10	14.20
HE FAU Furnace, MF, 14	22.70
HE FAU Furnace, MH, 4	41.00
HE FAU Furnace, MH, 5	44.70

HE FAU Furnace, MH, 6	23.20
HE FAU Furnace, MH, 8	23.90
HE FAU Furnace, MH, 9	27.90
HE FAU Furnace, MH, 10	33.40
HE FAU Furnace, MH, 13	37.20
HE FAU Furnace, MH, 14	47.80
HE FAU Furnace, MH, 15	21.10
HE FAU Furnace, MH, 16	39.50
HE FAU Furnace, SF, 4	35.70
HE FAU Furnace t, SF, 5	52.90
HE FAU Furnace, SF, 6	28.70
HE FAU Furnace, SF, 8	24.60
HE FAU Furnace, SF, 9	30.40
HE FAU Furnace, SF, 10	34.10
HE FAU Furnace, SF, 13	40.00
HE FAU Furnace, SF, 14	39.80
HE FAU Furnace, SF, 15	17.90
HE FAU Furnace, SF, 16	64.90
Minor Furnace Repair, Renter, All	0.00