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SOUTHWEST GAS CORPORATION

March 31, 2017

Arizona Corporation Commission
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Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007-2996

Re: **Docket No. G-00000G-17-0089**

Southwest Gas Corporation respectfully submits its Energy Efficiency and Renewable Energy Resource Technology portfolio implementation plan annual progress report. This report is provided pursuant to Arizona Administrative Code Section R14-2-2509(A).

If you have any questions or require additional information, I can be reached at 602-395-4058.

Respectfully submitted,

Matthew D. Derr
Regulatory Manager/Arizona

Cc: Barbara Keene, ACC Utilities Division
Julie McNeely-Kirwan, ACC Utilities Division

Southwest Gas Corporation

Energy Efficiency and Renewable Energy Resource Technology Portfolio Implementation Plan

Program Year Five/Six
Annual Progress Report
July 1, 2016-December 31, 2016

March 31, 2017

Docket No. G-00000G-17-0089

SOUTHWEST GAS CORPORATION

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ARIZONA ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE TECHNOLOGY PORTFOLIO IMPLEMENTATION PLAN

Overview

Pursuant to Arizona Administrative Code (AAC) Section R14-2-2509(A) - referred to as the Gas Utility Energy Efficiency Standards (Gas EE Standards), Southwest Gas Corporation (Southwest Gas or Company) respectfully submits its annual progress report (Report) for the Company's Energy Efficiency (EE) and Renewable Energy Resource Technology (RET) portfolio (EE & RET Plan). In Decision 75592, the Commission approved the Company's EE & RET Plan for Program Year Five/Six (PY5/6), effective for an eighteen month period from July 1, 2016 through December 31, 2017. This Report includes expenditures and participation rates for the six-month period covering July 1, 2016 through December 31, 2016 of PY5/6.

Southwest Gas previously reported on a full year of data for Program Year Four (PY4), covering the period June 1, 2015 through June 30, 2016, in its status report filed September 30, 2016 in Docket No. G-00000G-16-0100.

Pursuant to Decision No. 73229, the Company includes an evaluation of cost-effectiveness for each applicable program and measure in this Report, listing any measures that have ceased to be cost-effective and indicating why they are no longer cost-effective.

Additionally, pursuant to Decision No. 74300, Southwest Gas includes tables that list the following information:

- All Arizona Corporation Commission (Commission) approved programs and measures, and budgeted expenditures by program
- Actual annual expenditures by program
- Plan cost-effectiveness ratio per measure (last calculated by the Commission's Utilities Division Staff (Staff))
- Actual cost-effectiveness ratio per measure (using the Staff-approved method with all criteria updated to reflect the most recent data available)
- Program annual therm savings and lifetime therm savings (plan and actual data)
- Program cost-effectiveness test benefits, costs, and net benefits (plan and actual data)

Program Summary – PY5/6

Southwest Gas submitted its EE & RET Plan for PY5 (Plan) on May 28, 2015. In lieu of a PY6 EE & RET Plan filing, the Company filed a supplement to its PY5 filing on May 10, 2016, adding two programs and requesting that the Plan, as supplemented, be approved for both PY5 and PY6. On June 27, 2016, the Commission issued Decision No. 75592 approving the following eight programs with a budget of $5.495 million.

Residential Energy Management Programs

1. *Smarter Greener Better*® Residential Rebates
2. *Smarter Greener Better* Homes

Non-Residential Energy Management Programs

3. *Smarter Greener Better* Commercial Rebates
4. *Smarter Greener Better* Custom Commercial Rebates
5. *Smarter Greener Better* Distributed Generation
6. *Smarter Greener Better* Schools (Pilot)

Low Income Program

7. *Smarter Greener Better* Low Income Energy Conservation (LIEC)

Renewable Energy Resource Technology Program

8. *Smarter Greener Better* Solar Thermal Rebates

Below is a brief summary of each PY5/6 program:

Smarter Greener Better (SGB) Residential Rebates: Rebates are offered to residential customers on qualified program measures upon proof-of-purchase and installation. The measures include: low-flow showerheads, ENERGY STAR® clothes washers (front load only), and ENERGY STAR windows.

SGB Homes: Tiered rebates are offered to homebuilders for homes achieving a HERS Index Score of 65 or below. Homes achieving a HERS Index Score between 65 and 61 are eligible for a Tier 1 rebate, and homes achieving a HERS Index Score of 60 and below are eligible for a Tier 2 rebate. The program is available to all builders of new single-family subdivision and custom homes and multi-family homes featuring natural gas water and/or space heating.

SGB Commercial Rebates: Rebates are offered to non-residential customers on qualified program measures upon proof-of-purchase and installation. The measures include: high-efficiency tankless and storage commercial water heaters; condensing boilers; steam traps; air curtains; and commercial kitchen high-

efficiency products, including dishwashers, natural gas fryers, steamers, infrared charbroilers, and pre-rinse spray valves.

SGB Custom Commercial Rebates: Rebates are offered to non-residential customers based on achieved annual energy savings. The program does not specify eligible measures in order to provide participants maximum flexibility in identifying potential projects. Participants may propose any measure that produces a verifiable natural gas usage reduction, is installed in either existing or new construction applications and exceeds code, has a minimum useful life of seven years, and exceeds minimum cost-effectiveness requirements. Qualifying measures include those that target cost-effective natural gas savings, such as retrofits of existing systems, improvements to existing systems, and first time installations where the system's efficiency exceeds applicable codes or standard industry practices.

SGB Distributed Generation: Rebates are offered to non-residential customers to achieve significant fuel savings by promoting high-efficiency electric generation with waste heat recovery, providing financial benefits during peak electrical demand periods, and demonstrating the use of new technologies that are being brought to market. The rebates are based upon the size and efficiency of the system being installed.

SGB Schools (Pilot): Rebates are offered to Arizona schools that have been unable to participate in energy efficiency programs due to funding constraints. This pilot program offers low cost, energy saving upgrades to K-12 public and charter schools. With potentially up to 100 percent of project costs covered when combined with other available Company rebates, eligible schools will save money on utility bills and increase the comfort of their students and staff while minimizing out-of-pocket costs.

SGB LIEC: The LIEC program is available to households with annual incomes less than 200 percent of the federal poverty income guidelines and is comprised of two components: a weatherization program that provides various energy efficient home improvements such as insulation, duct repairs, weather-stripping and HVAC replacement, which is administered by Southwest Gas in conjunction with the Arizona Department of Housing (ADOH); and an emergency bill assistance program to assist customers with paying household natural gas bills, which is administered by Southwest Gas in conjunction with the Arizona Community Action Association (ACAA).

SGB Solar Thermal Rebates: Rebates are offered to residential and non-residential customers on qualified solar thermal systems used for water heating or pool heating with a natural gas back-up, upon proof-of-purchase and installation.

The program objective is to increase public awareness of the benefits of solar thermal systems and to reduce customer natural gas usage by providing economically beneficial rebates to install the systems. Long-term customer energy savings are realized throughout the life of the solar thermal systems.

Southwest Gas monitors and evaluates each program and measure included in its EE & RET Plan, and implements program and process improvements as needed. When the Company utilizes in-house staff for its measurement and evaluation activities, there are no direct costs charged to the measurement, verification, and evaluation (MV&E) budget category under each program. For programs that are administered by a third-party, MV&E costs are accumulated under the Delivery budget category.

Energy Efficiency Standards

Pursuant to Section R14-2-2504 of the Gas EE Standards, Southwest Gas is required to achieve cumulative annual energy savings, expressed as therms or therm equivalents, equal to at least six percent of the Company's retail gas energy sales for calendar year 2019.

For PY6, the Company is required to achieve cumulative annual energy savings of at least 3.60 percent. Using Southwest Gas' 2015 retail sales of 621,916,496, the Company's PY6 cumulative energy savings goal of 3.60 percent is 22,388,994 therms. With a cumulative total of 15,660,804 therms achieved in PY1 through PY4, Southwest Gas' PY5/6 annual energy savings goal is 6,728,190 therms. When the complete data for PY5/6 is available, final PY5/6 expenditures and energy savings will be included in a subsequent report.

Table 1 – Cumulative and Annual Energy Savings

Year	Retail Sales Volumes Used	Cumulative Energy Savings Goal (%)	Cumulative Energy Savings Goal (therms)	Annual Energy Savings Achieved (therms)	Cumulative Energy Savings Achieved (%)	Cumulative Energy Savings Achieved (therms)
1	617,174,760	0.50%	3,085,874	3,146,127	0.51%	3,146,127
2	634,605,252	1.20%	7,615,263	5,230,962	1.32%	8,377,089
3	603,223,751	1.80%	10,858,028	4,036,023	2.06%	12,413,112
4	643,952,120*	2.40%	15,454,851	3,247,692	2.43%	15,660,804
5	595,037,248	3.00%	17,851,117	N/A	N/A	N/A
6	621,916,496	3.60%	22,388,994			

* In Southwest Gas' AZ EE & RET Plan for PY3 and PY4, which was filed on May 31, 2013, the Company used its most current retail sales volumes from 2012 to calculate its fourth-year cumulative energy savings goal. The Company has re-calculated its fourth-year cumulative energy savings goal using 2013 retail sales volumes as shown above.

Progress Report

Pursuant to Decision No. 73229, Southwest Gas performed its biannual review of the performance of available measures and has included the actual cost-effectiveness ratios for each program and measure with participation during the reporting period. In addition, pursuant to Decision No. 74300, the actual cost-effectiveness ratios for PY5/6 were calculated using the Staff-approved method (including methodology for calculating electric line losses) and with all criteria updated to reflect the most recent data available.

As expected, participation and energy savings have continued to increase with the addition of programs approved in Decision No. 75592. Performance in the SGB Homes program has been particularly strong, and with the Homes program performance, the Company expects to expend its entire approved budget of $5.495 million for PY5/6. Southwest Gas' program performance for July 1, 2016 through December 31, 2016 is set forth in **Tables 2 through 13** below. Tables 2 through 5 summarize Southwest Gas' program activity. Tables 6 through 13 present detailed information on each available program.

Table 2 shows the total PY5/6 approved annual budget of $5.495 million and the expenditures between July 1, 2016 and December 31, 2016 identified by program and budget category.

Table 2 – PY5/6: Budget and Expenditures

Program	Annual Budget	Expenditures (July 1, 2016 – December 31, 2016)[1]					
		Rebates	Administration	Outreach	Delivery	MV&E	Program Total Cost
Residential							
SGB Residential Rebates	$ 295,000	$ 12,208	$ -	$ 11,753	$ 1,605	$ -	$ 25,566
SGB Homes	$2,705,000	$1,848,450	$ -	$ 4,772	$ -	$ -	$1,853,222
Total Residential	*$3,000,000*	*$1,860,658*	*$ -*	*$ 16,525*	*$ 1,605*	*$ -*	*$1,878,788*
Non-Residential							
SGB Commercial Rebates	$ 400,000	$ 12,268	$ -	$ 7,547	$ 1,344	$ -	$ 21,159
SGB Custom Commercial Rebates	$ 330,000	$ -	$ -	$ 7,547	$ 12,147	$ -	$ 19,694
SGB Distributed Generation	$ 300,000	$ -	$ -	$ 7,547	$ 4,114	$ -	$ 11,661
SGB Schools	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
Total Non-Residential	*$1,530,000*	*$ 12,268*	*$ -*	*$ 22,640*	*$ 17,605*	*$ -*	*$ 52,513*
Low Income							
SGB LIEC: Weatherization[2]	$ 450,000	$ -	$ -	$ -	N/A	N/A	$ -
SGB LIEC: Bill Assistance	$ 200,000	$ 80,534	$ 15,000	N/A	N/A	N/A	$ 95,534
Total Low Income	$ 650,000	*$ 80,534*	$ 15,000	$ -	$ -	$ -	*$ 95,534*
Total Energy Efficiency	***$5,180,000***	***$1,953,460***	***$ 15,000***	***$ 39,165***	***$ 19,210***	***$ -***	***$2,026,835***
Renewable Energy Resource Technology							
SGB Solar Thermal Rebates	$ 315,000	$ 13,180	$ 1,438	$ 2,547	$ 5,523	$ -	$ 22,687
Total EE & RET Plan	**$5,495,000**	**$1,966,640**	**$ 16,438**	**$ 41,712**	**$ 24,733**	**$ -**	**$2,049,522**

[1] Totals, which are rounded to the nearest dollar, may not add due to rounding.

[2] Pursuant to Decision No. 72723, total expenditures for the SGB LIEC: Weatherization program including the additional $200,000 shareholder funds added to the program budget are $186,372 - with $139,360 allocated to rebates, $38,644 to administration, and $8,368 to outreach. The rebates budget category includes non-energy benefits related to health and safety improvements. Program delivery and evaluation are performed by the ADOH and community agencies and therefore, the associated costs are incorporated into the administration budget category.

Table 3 shows the PY5/6 estimated and actual participation numbers for the period July 1, 2016 through December 31, 2016 for each program.

Table 3 – PY5/6: Participation

Program	Estimated Participation	Actual Participation (July 1, 2016 – December 31, 2016)
Residential		
SGB Residential Rebates	3,076	200
SGB Homes	3,800	2,136
Total Residential	*6,876*	*2,336*
Non-Residential		
SGB Commercial Rebates	310	20
SGB Custom Commercial Rebates	4	0
SGB Distributed Generation	2	0
SGB Schools	10	0
Total Non-Residential	*326*	*20*
Low Income		
SGB LIEC: Weatherization	260	64
SGB LIEC: Bill Assistance	700	532
Total Low Income	*960*	596
Total Energy Efficiency	***8,162***	***2,952***
Renewable Energy Resource Technology		
SGB Solar Thermal Rebates	126	5
Total EE & RET Plan	**8,288**	**2,957**

Pursuant to Decision No. 74300, **Table 4** is included to capture plan data for PY5/6.

Table 4 – PY5/6: Annual and Lifetime Therm Savings; Lifetime Societal Benefits, Costs and Net Benefits; and Cost-Effectiveness (Plan Data)

Program	Annual Therm Savings[1]	Lifetime Therm Savings[1]	Societal Benefits[2]	Societal Costs[2]	Net Benefits[2]	Cost-Effectiveness Ratio
Residential						
SGB Residential Rebates	79,548	1,637,698	$1,738,452	$379,951	$1,358,501	4.58
SGB Homes	610,666	18,319,978	$21,338,904	$7,089,922	$14,248,982	3.01
Total Residential	*690,214*	*19,957,676*	*$23,077,356*	*$7,469,873*	*$15,607,483*	3.09
Non-Residential						
SGB Commercial Rebates	210,037	3,363,782	$3,038,621	$661,519	$2,377,103	4.59
SGB Custom Commercial Rebates	2,271,130	16,047,310	$10,944,800	$483,449	$10,461,352	22.64
SGB Distributed Generation	473,314	9,466,275	$9,589,072	$919,300	$8,669,771	10.43
SGB Schools[3]	N/A	N/A	N/A	N/A	N/A	N/A
Total Non-Residential	*2,954,481*	*28,877,367*	*$23,572,493*	*$2,064,268*	*$21,508,226*	*11.42*
Low Income						
SGB LIEC: Weatherization[4]	75,477	1,698,232	$1,868,797	$629,190	$1,239,606	2.97
SGB LIEC: Bill Assistance[3]	N/A	N/A	N/A	N/A	N/A	N/A
Total Low Income	*75,477*	*1,698,232*	*$1,868,797*	*$629,190*	*$1,239,606*	*2.97*
Total Energy Efficiency	***3,720,172***	***50,533,275***	***$48,518,646***	***$10,163,331***	***$38,355,315***	***4.77***
Renewable Energy Resource Technology						
SGB Solar Thermal Rebates	20,042	400,840	$385,917	$1,495,726	($1,109,810)	N/A[5]
Total EE & RET Plan	**3,740,214**	**50,934,115**	**$48,904,563**	**$11,659,057**	**$37,245,505**	**4.19**

[1] These values, which are rounded to the nearest whole number, represent a combination of therms and therm equivalents from electric savings. The kWh savings are converted into therm equivalents for the annual and total lifetime energy savings reported. The therm equivalent value is calculated as the source fuel feeding the electric generation power plant. Due to inefficiencies in

the generation, transmission and distribution of electricity, at the time Southwest Gas' EE & RET Plan was filed for PY5/6, the kWh saved at the point of consumption was estimated to be 30 percent of the total energy that is required to provide the electric power. Therefore, to calculate the total value of energy saved per kWh of electricity, Southwest Gas multiplied the kWh savings by a factor of 3.340[a] for reporting annual and lifetime savings.

[2] Totals, which are rounded to the nearest dollar, may not add due to rounding.

[3] There are no therm savings attributable to the SGB Schools and SGB LIEC: Bill Assistance programs.

[4] Savings for the SGB LIEC: Weatherization program includes estimated savings for the additional $200,000 shareholder funds.

[5] Pursuant to the Gas EE Standards, cost-effectiveness is not required for RET programs.

[a] ENERGY STAR Performance Ratings Methodology for Incorporating Source Energy Use, March 2011

Pursuant to Decision No. 74300, **Table 5** is included to capture actual data for PY5/6. Data reported in the column titled Societal Benefits is limited (per the current Staff-approved method) to only natural gas and electric energy savings associated with each EE & RET program.

Table 5 – PY5/6: Annual and Lifetime Therm Savings; Lifetime Societal Benefits, Costs and Net Benefits; and Cost-Effectiveness (Actual Data)

Program	Annual Therm Savings[1]	Lifetime Therm Savings[1]	Societal Benefits[2]	Societal Costs[2]	Net Benefits[2]	Cost-Effectiveness Ratio
Residential						
SGB Residential Rebates	3,067	56,142	$57,048	$31,306	$25,742	1.82
SGB Homes	583,934	17,518,006	$13,114,468	$4,267,186	$8,847,282	3.07
Total Residential	*587,000*	*17,574,148*	*$13,171,516*	*$4,298,492*	*$8,873,024*	3.06
Non-Residential						
SGB Commercial Rebates	8,055	105,000	$48,495	$30,026	$18,469	1.62
SGB Custom Commercial Rebates	0	0	$0	$0	$0	0.00
SGB Distributed Generation	0	0	$0	$0	$0	0.00
SGB Schools[3]	N/A	N/A	N/A	N/A	N/A	N/A
Total Non-Residential	*8,055*	*105,000*	*$48,495*	*$30,026*	*$18,469*	*1.62*
Low Income						
SGB LIEC: Weatherization[4]	7,581	170,568	$139,425	$164,904	($25,479)	0.85
SGB LIEC: Bill Assistance[3]	N/A	N/A	N/A	N/A	N/A	N/A
Total Low Income	*7,581*	*170,568*	$139,425	$164,904	($25,479)	*0.85*
Total Energy Efficiency	***602,636***	***17,849,716***	***$13,359,436***	***$4,493,422***	***$8,866,013***	***2.97***
Renewable Energy Resource Technology						
SGB Solar Thermal Rebates	4,666	93,320	$46,872	$59,603	($12,731)	N/A[5]
Total EE & RET Plan	**607,302**	**17,943,036**	**$13,406,308**	**$4,553,025**	**$8,853,283**	**2.94**

[1] These values, which are rounded to the nearest whole number, represent a combination of therms and therm equivalents from electric savings. The kWh savings are converted into therm equivalents for the annual and total lifetime energy savings reported.

[2] Totals, which are rounded to the nearest dollar, may not add due to rounding.

[3] There are no therm savings attributable to the SGB Schools and SGB LIEC: Bill Assistance programs.

[4] Savings for the SGB LIEC: Weatherization program includes estimated savings for the additional $200,000 shareholder funds.

[5] Pursuant to the Gas EE Standards, cost-effectiveness is not required for RET programs.

The estimated and actual participation and therm and kWh savings needed to calculate therm equivalent savings for the PY5/6 period July 1, 2016 through December 31, 2016 for each Commission-approved program and measure are shown below in **Tables 6 through 13**. The plan cost-effectiveness ratio per measure calculated by Southwest Gas and the actual cost-effectiveness ratio based on program participation through December 31, 2016, are also included in the tables. Pursuant to Decision No. 73229, the Company has listed measures that have ceased to be cost-effective and indicated why they are no longer cost-effective.
The plan cost-effectiveness ratio per measure as last calculated by Staff pursuant to Decision No. 74300 is included in Staff's report dated June 2, 2016 in Docket No. G-01551A-15-0168.

Table 6 – PY5/6: SGB Residential Rebates

Southwest Gas experienced a slow start to the first six months of the SGB Residential Rebates program, which is expected when launching new or re-launching existing programs. Increased participation is anticipated as more customers become aware of the program and available rebates throughout the program year.

The Company promoted the SGB Residential Rebates program by providing its customer service technicians with rebate information to leave behind during customer visits, sending out bill inserts in September, October, and November 2016, and placing digital search retargeting and Facebook ads online. In addition, Southwest Gas attended The EVENT at PIR Sales in Chandler, AZ and promoted the SGB Residential Rebates program as well as the Company's other energy efficiency programs and rebates.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Low-Flow Showerhead	1,140	5	70	N/A	4.74	0.82
Clothes Washer	911	159	1,463	9,021	3.17	1.67
Windows	1,025	36	1,016	6,161	4.96	2.33
Total	**3,076**	**200**	**2,549**	**15,182**	**4.58**	**1.82**

Participation to date in the low-flow showerhead has been less than expected which, in part, has resulted in the actual cost-effectiveness ratio for this measure being somewhat less than 1.0. Also, the value of the water saved by this measure has not been included in the cost-effectiveness test. Southwest Gas is confident that including the monetary value of water savings as part of the cost-effectiveness test in an

upcoming filing, in combination with increased participation, that the low-flow showerhead will be a cost-effective program measure.

Table 7 – P5/6: SGB Homes

The SGB Homes program has experienced higher participation for the first six months of PY5/6 than originally estimated and has been very cost-effective. Southwest Gas anticipated that lowering the HERS scores required to qualify for incentives under the SGB Homes program from < 65 and ≥ 65 to 65-61 and ≥ 60 would put downward pressure on program participation. However, Arizona's homebuilder community has responded positively to the SGB Homes program incentives by incorporating energy efficient design changes into new housing portfolios and building a greater number of energy efficient new homes. As a result, program participation is well ahead of estimated participation through the first six months of PY5/6 and Southwest Gas anticipates that the Homes program will exceed the $2,705,000 budget well before the December 31, 2017 expiration of the PY5/6 program period.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Tier 1	2,940	1,291	166,506	5,231,418	2.54	3.61
Tier 2	860	845	118,155	3,539,759	4.08	2.53
Total Homes	**3,800**	**2,136**	**284,661**	**8,771,177**	**3.01**	**3.07**

Table 8 – PY5/6: SGB Commercial Rebates

The SGB Commercial program experienced sluggish participation for the first six months of the program term, which is not unexpected with the closure and relaunch of the program. Communicating program continuity continues to be a challenge, with customers unsure if the programs are still available. Southwest Gas continues to promote the program and has provided various avenues to inform stakeholders about its energy efficiency programs including but not limited to: a commercial Lunch and Learn with customers, trade allies and manufacturers in Tucson in September; a sponsored large customer conference in Phoenix in January; and digital search retargeting and Facebook ads online.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Low-Flow Showerhead	0	0	0	N/A	N/A	0.00
Clothes Washer	0	0	0	0	N/A	0.00
Natural Gas Tankless Water Heater	35	1	570	N/A	12.28	5.34
Natural Gas Storage Water Heater – Tier 1	35	4	1,260	N/A	3.70	1.62
Natural Gas Storage Water Heater – Tier 2	35	0	0	N/A	4.04	0.00
Natural Gas Condensing Boiler	40	0	0	N/A	3.64	0.00
Boiler – Steam Trap (High Pressure)	20	0	0	N/A	2.92	0.00
Boiler – Steam Trap (Low Pressure)	20	0	0	N/A	1.56	0.00
Air Curtain	15	0	0	N/A	7.32	0.00
Natural Gas Steamer	15	0	0	N/A	7.17	0.00
Natural Gas Fryer	15	15	6,225	N/A	2.94	1.44
Natural Gas Charbroiler	15	0	0	N/A	2.46	0.00
Dishwasher (High Temp): Single Tank Conveyor	15	0	0	0	5.26	0.00
Pre-Rinse Spray Valve	50	0	0	N/A	4.34	0.00
Total	**310**	**20**	**8,055**	**N/A**	**4.59**	**1.62**

Table 9 – PY5/6: SGB Custom Commercial Rebates

As of December 2016, there were four pending Custom projects. Typically, custom projects have long lead times and require engineering evaluations that incur costs to the program budget. The Company anticipates that once pending projects are finalized and rebates are paid, the SGB Custom Commercial program will continue to be cost-effective.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Custom Rebate	4	0	0	N/A	22.64	0.00

Table 10 – P5/6: SGB Distributed Generation

Similar to the SGB Custom Commercial Rebates program, the SGB Distributed Generation program is directed primarily toward large projects, which require significant financial investment and extended lead times from planning to completion. There is currently one pending project in the early stages of review.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Fuel efficiency $\geq$ 60%	0	0	0	0	0.00	0.00
Fuel efficiency $\geq$ 65%	0	0	0	0	0.00	0.00
Fuel efficiency $\geq$ 70%	2	0	0	0	10.43	0.00
Total	**2**	**0**	**0**	**0**	**10.43**	**0.00**

Table 11 – PY5/6: SGB Schools (Pilot)

As of December 31, 2016, the Southwest Gas SGB Schools (Pilot) program experienced zero participation; however, the Company has initiated discussions with numerous Arizona schools and anticipates rebate expenditures throughout 2017. For many of the Arizona schools, the energy efficiency gains associated with the electric upgrades were readily apparent and negated the need for an in-depth and often costly ASHRAE Level II audit. In many cases, the Arizona electric utilities were able to perform simple walk through audits to identify opportunities. This allowed them to redirect funds set aside for ASHRAE Level II audits to lighting and HVAC upgrades. As a result of these changes to the program, Southwest Gas was unable to obtain ASHRAE Level II audit results for most schools.

The energy efficiency associated with the natural gas upgrades are also quite apparent and tend to center around the schools' outdated and inefficient boiler systems. The Company is working with the school district facility managers, and where warranted, with the electric utility energy auditors, to identify additional opportunities at the schools that have already participated in the Arizona electric utilities' programs. Upgrades at each school will be prioritized based on the highest potential for savings. The Company will not require ASHRAE Level II energy audits unless there is a specific need to assist with the prioritization of measures. Additionally, schools that were not audited by the Arizona electric utilities, but fall within a participating district, will be considered for upgrades if the school's equipment ranking system demonstrates a particular need.

Measure	Estimated Participation	Paid	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Schools	10	0	0	N/A	N/A	N/A

Table 12 – PY5/6: SGB LIEC

Southwest Gas is on pace to exceed its participation goals with its SGB LIEC Bill Assistance program, as shown in the table below. Currently, the Company has served 76% of the estimated participation goal.

Participation in the SGB LIEC Weatherization program during PY5/6 has increased in comparison to the previous program year during the same period. In PY4, 43 homes were treated during the same period in comparison to the PY5/6 homes treated of 64 which is a 12 percent increase in participation over the previous program year. The agency partners have attributed this increase to the change in the Federal Poverty Guideline percentage allowance of 200 percent.

Based on ADOH projected program budgets, the current participation goal for PY5/6 is 172, as opposed to the projected 260 listed in the table below. Southwest Gas is continuing to work with the ADOH and other agencies partners to continue to increase program participation.

Southwest Gas continues to promote the SGB LIEC program through bill inserts, online with the Company's website, Facebook and Twitter ads, in the Greenlee local Newsletter *The Clarion*, the *Pima Council on Aging Newsletter*, and at the AZ Utility Partners Summit, which was held October 28, 2016.

Measure	Estimated Participation	Actual Participation	Savings		Cost-Effectiveness Ratio	
			therms	kWh	Plan	Actual
Weatherization – Homes Assisted	260	64	2,112	160,282	2.97	0.85
Bill Assistance – Households Served	700	532	N/A	N/A	N/A	N/A
Total	**960**	**596**	**2,112**	**160,282**	**2.97**	**0.85**

Southwest Gas anticipates as participation in the SGB LIEC Weatherization program increases toward the ADOH goal of 172 homes treated, that program cost-effectiveness should exceed 1.0 by the end of the PY5/6 period.

Table 13 – PY5/6: SGB Solar Thermal Rebates

Southwest Gas continued to promote the SGB Solar Thermal Rebates program by sending out bill inserts in September, October, and November 2016. In addition, Southwest Gas attended The EVENT at PIR Sales in Chandler, AZ and promoted the SGB Solar Thermal Rebates program as well as the Company's other energy efficiency programs and rebates.

The reserved commercial project for pool heating referenced in the last report was completed and is included in the table below.

Measure	Estimated Participation	Paid	Savings	
			therms	kWh
Residential Solar Water Heating System	123	4	541	N/A
Non-Residential Solar Water Heating System	2	0	0	N/A
Non-Residential Solar Pool Heating System	1	1	4,125	N/A
Total	**126**	**5**	**4,666**	**N/A**

Conclusion

As shown in Table 2, Southwest Gas used $2 million of its authorized EE & RET budget of $5.495 million during the first six months of PY5/6. With strong performance in the SGB Homes program, Southwest Gas anticipates it will exhaust its authorized budget of $5.495 million prior to the December 31, 2017 expiration of the PY5/6 program period.

This is a testament to the SGB Homes program effectively incentivizing Arizona's homebuilders to invest in energy efficient home designs to meet the higher energy efficiency standards needed to qualify for the SGB Homes program. Each new home built that qualifies for the SGB Homes program will achieve energy efficiency savings over the life of home to the direct benefit of the homeowner and to the state of Arizona in reduced source energy and water requirements.

The performance of the SGB Homes program illustrates the need to maintain flexibility in program funding to be able to direct funding to programs exhibiting the greatest customer interest and achieved savings. The Commission recognized this need and granted the Company this authority in Decision No. 75592. The ability to shift funds between programs, is preferable to stopping and attempting to restart cost-effective programs that face budget constraints. Program continuity is an important aspect for program success.

Southwest Gas looks forward to continue working with the Commission to ensure its EE & RET efforts address customer interests and help achieve the broader energy and water-related saving goals of the state of Arizona.