

OPEN MEETING



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MEMORANDUM

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TO: THE COMMISSION

APR 10 2012

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FROM: Utilities Division

DATE: April 10, 2012

DOCKETED BY	<i>[Signature]</i>
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RE: SOUTHWEST GAS CORPORATION – APPLICATION FOR APPROVAL OF AN ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE TECHNOLOGY PORTFOLIO IMPLEMENTATION PLAN (DOCKET NO. G-01551A-11-0344)

The New Revised Plan

On September 13, 2011, in compliance with the rate case Settlement Agreement, Southwest Gas Corporation (“Southwest” or “the Company”) filed an Application for Approval of its Energy Efficiency and Renewable Energy Resource Technology Portfolio Implementation Plan (“New Revised Plan”). The New Revised Plan application was filed in Docket No. G-01551A-11-0344.

Background

The Modified Plan. On November 12, 2010, Southwest filed an initial implementation plan as part of its rate case (Docket No. G-01551A-10-0458, “Rate Case Docket”). The parties (with the exception of the Residential Utility Consumer Office) entered in a Settlement Agreement on July 15, 2011, which was later approved by the Commission in Decision No. 72723 (January 6, 2012). As part of the Settlement Agreement, the Company provided supplemental EE information resulting in the Modified EE and RET Plan (“Modified Plan”). The focus of the Modified Plan was a group of cost-effective measures intended to achieve savings of 1.25 million therms within nine months of approval, as required under the terms of the Settlement Agreement. The Modified Plan was addressed in a Staff Report and proposed order docketed on September 30, 2011 in the Rate Case Docket. The Staff Report and Proposed Order are pending and have not been decided.

The Settlement Agreement included the following commitment by Southwest, with respect to the New Revised Plan:

“In order to increase the customer annual energy savings that are being agreed to as part of this Agreement, Southwest Gas shall file in a new docket within 60 days of filing this Agreement a new and revised EE and RET Implementation Plan pursuant to A.A.C. R14-2-2501 et seq. setting forth a plan for how it proposes to comply with the energy savings goals set forth therein. The new and revised EE

and RET Implementation Plan will be incremental to the modified EE and RET Plan measures that are being committed to by Southwest Gas as part of this Agreement.”

Southwest filed the New Revised Plan in compliance with the above commitment.

Scope of the Staff Report

New Measures and Programs. In this Staff Report, although existing and previously addressed programs will be described to provide a summary of the portfolio as a whole, the focus of the analysis and recommendations herein will be the two new programs and 17 new measures proposed in the New Revised Plan. (The 17 new measures being proposed are associated with both existing and proposed new programs.)

Cost-effectiveness: Reporting and Discontinuance. Cost-effectiveness will be evaluated at the measure level. Cost-effectiveness for measures already reviewed will not be revisited. Staff recommends that the Company file biannual reports concerning the performance of the measures included in its implementation plan, listing any measures which have ceased to be cost-effective and indicating why they have ceased to be cost-effective. The biannual measure report would be in addition to the reporting requirements of R14-2-2509.A. Staff also recommends that any measures which cease to be cost-effective should be discontinued as part of the implementation plan.

DSM adjustor rate. On January 30, 2012, in compliance with Decision No. 60532, Southwest filed, to reset its DSM surcharge (“DSMS”) (Docket No. G-01551A-12-0037).¹ Southwest requested an increase from the current \$0.00200 to \$0.00704 per therm for \$4.8 million in anticipated spending, which is what the Company anticipates spending from April 1, 2012 through March 31, 2013 absent action on either the Modified Plan or New Revised Plan. Should the New Revised Plan with its associated \$16.5 million budget be approved, Southwest requests an increase to \$0.02552. This amount takes into account the currently over-collected DSM bank balance and surcharge accruals through March 2012.

Staff recommends the DSMS reset be done as part of the current docket, and that the DSMS include the following: (i) the existing DSM bank balance; (ii) projected spending through 2013 for all existing programs and measures, and any programs and measures approved as part of the Modified or New Revised Plans; and (iii) the costs of the Residential Financing Program approved in April 2011 (Decision No. 72256).

New Programs and Measures. The table below lists all the programs, existing or proposed, in the Southwest portfolio. Listed, by program, and in bold, are the new measures proposed as part of the New Revised Plan. The two new pilot programs are also indicated, and

¹ In the New Revised Plan (September 2011), Southwest had requested a reset to “approximately \$0.02673 per therm.

are also in bold print. The new programs and measures were the focus of Staff's cost-effectiveness analysis.

Program Name	Existing, Pending or New	New Measures
<i>Residential Sector</i>		
<i>SGB Residential Rebates</i>	Existing	<ul style="list-style-type: none"> • Condensing Water Heater • Lavatory Faucet • Boiler • Duct Insulation and Duct Sealing
<i>SGB Homes</i>	Existing	<ul style="list-style-type: none"> • Condensing Water Heater² • Clothes Dryer
<i>SGB Residential Energy Assessments</i>	New (pilot)	<ul style="list-style-type: none"> • Energy audits; provides direct install: • efficient showerheads; • lavatory aerators; • kitchen aeraerators
<i>Non-residential Sector</i>		
<i>SGB Business Rebates</i>	Existing	<ul style="list-style-type: none"> • Steam Boiler • Large Vat Fryer • Convection Oven • Dishwasher (Low Temp): Single Tank Conveyor • Dishwasher (Low Temp): Multi Tank Conveyor
<i>SGB Custom Business Rebates</i>	Proposed as part of the Modified EE and RET Plan (pending)	N/A
<i>SGB Business Energy Assessments</i>	New (pilot)	<ul style="list-style-type: none"> • Energy Audits
<i>SGB Distributed Generation</i>	Existing	N/A
<i>Low-Income Sector</i>		
<i>SGB Low-Income Energy Conservation</i>	Existing	N/A
<i>Educational Sector</i>		
<i>SGB Energy Education</i>	Proposed as part of the Modified EE and RET Plan (pending)	<ul style="list-style-type: none"> • Print and Radio
<i>Renewable Sector</i>		
<i>SGB Solar Thermal Rebates</i>	Proposed as part of the Modified EE and RET Plan (pending)	N/A

² The condensing water heater is proposed for both the Residential Rebates program and the Homes program. In cases where the Company is proposing the same energy efficient measure for more than one program, cost-effectiveness is evaluated separately for each program. Program costs vary from program to program, and can significantly impact the benefit-cost ratio, meaning that a measure could be a cost-effective part of one program, but not another.

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Total Implementation Plan Budget

Southwest is proposing an overall budget of \$16.5 million, as compared to the existing budget of approximately \$4.8 million and the \$8.4 million budget proposed for the Modified Plan. The \$16,500,000 budget, below, includes: (i) existing programs and measures; (ii) programs and measures proposed as part of the pending Modified Plan; and (iii) programs and measures proposed as part of the New Revised Plan. The budget table lists projected costs by program and category.

Smarter Greener Better ("SGB") Program	Rebates	Administration	Outreach	Delivery	MV&E	Total Cost
Residential						
SGB Residential Rebates	\$3,853,350	\$41,250	\$330,000	\$1,192,900	\$82,500	\$5,500,000
SGB Homes	\$3,199,948	\$160,052	\$480,000	\$80,000	\$80,000	\$4,000,000
SGB Residential Energy Assessments	\$165,000	\$267,500	\$133,750	\$107,000	\$26,750	\$700,000
Total Residential	\$7,218,298	\$468,802	\$943,750	\$1,379,900	\$189,250	\$10,200,000
Non-residential						
SGB Business Rebates	\$1,102,270	\$90,000	\$222,730	\$495,000	\$90,000	\$2,000,000
SGB Custom Business Rebates	\$65,000	\$5,000	\$20,000	\$55,000	\$5,000	\$150,000
SGB Business Energy Assessments	\$350,000	\$17,500	\$105,000	\$175,000	\$52,500	\$700,000
SGB Distributed Generation	\$1,250,000	\$50,000	\$200,000	\$200,000	\$50,000	\$1,750,000
Total Non-residential	\$2,767,270	\$162,500	\$547,730	\$925,000	\$197,500	\$4,600,000
Low-Income						
SGB Low-Income Weatherization	\$373,500	\$67,500	\$9,000	\$0	\$0	\$450,000
Low-Income Bill Assistance	\$0	\$0	\$0	\$200,000	\$0	\$200,000
Total Low-Income	\$373,500	\$67,500	\$9,000	\$0	\$0	\$650,000
Education						
SGB Energy Education	\$0	\$60,000	\$482,500	\$0	\$7,500	\$550,000
Total Education	\$0	\$60,000	\$482,500	\$0	\$7,500	\$550,000
Renewable Energy Resource Technology						
SGB Solar Thermal Rebates	\$350,000	\$15,000	\$60,000	\$67,500	\$7,500	\$500,000
Total Renewable Energy Resource Technology	\$350,000	\$15,000	\$60,000	\$67,500	\$7,500	\$500,000
Total EE and RET Plan	\$10,709,068	\$773,802	\$2,042,980	\$2,372,400	\$401,750	\$16,500,000

The budget comparison table, below, shows the differences between the proposed budget for the New Revised Plan and the proposed budget for the Modified Plan. As previously noted, the pending Modified Plan proposes a budget of approximately \$8.4 million, while the New Revised Plan would bring the total budget to \$16.5 million.

Comparison of Proposed Budgets: New and Revised EE and RET Plan (Current Application) versus Modified Plan (Pending Application)

Residential Rebates	\$5,500,000	New Revised Plan (New Revised Plan)
	\$3,027,770	Modified Plan
	\$2,472,230	increase
Homes	\$4,000,000	New Revised Plan (New Revised Plan)
	\$2,260,500	Modified Plan
	\$1,739,500	increase
Residential Energy Assessments	\$700,000	increase (new program)
Business Rebates	\$2,000,000	New Revised Plan (New Revised Plan)
	\$891,275	Modified Plan
	\$1,108,725	increase
Custom Business Rebates	\$150,000	New Revised Plan (New Revised Plan)
	\$100,000	Modified Plan
	\$50,000	increase
Business Energy Assessments	\$700,000	increase (new program)
Distributed Generation	\$1,750,000	New Revised Plan (New Revised Plan)
	\$757,000	Modified Plan
	\$993,000	increase
Low-Income	\$650,000	unchanged
Education	\$550,000	New Revised Plan (New Revised Plan)
	\$200,000	Modified Plan
	\$350,000	increase
Solar Thermal Rebates	\$500,000	unchanged
Total difference	\$8,113,455	Total increase, from Modified Plan to New Revised Plan
Total Proposed Spending	\$16,500,000	

Recommendation. Staff recommends that the budget increase proposed for the New Revised Plan be adjusted to reflect any Commission-ordered changes, including measures or programs that are modified or not approved for inclusion in Southwest's Implementation Plan.

Cost-Effectiveness Issues

Summary. There are two general concerns regarding the cost-effectiveness of the new programs and measures proposed by Southwest in its New Revised Plan. One is that the Company has asserted that, under the Rules, pilot programs need not be cost-effective. The other is that the Company has proposed a significant number of individual measures with benefit-cost ratios well below what is required for cost-effectiveness.

Pilot Programs Required to be Cost-effective. In its application, Southwest asserts that "[p]ursuant to Section R14-2-2512(G) of the Gas EE Standard, cost-effectiveness is not required for pilot programs." Staff disagrees with the Company's interpretation of the Gas EE Standard. In fact, R14-2-2503(A) states that "[a]n affected utility shall design *each DSM program* to be cost-effective." There is no language exempting pilot programs from this requirement.

The language in R14-2-2512(G) does state, however, that "[r]esearch and development and pilot programs are not required to demonstrate cost-effectiveness." This narrow exemption allows a program to be continued beyond the pilot stage, even if cost-effectiveness was not demonstrated, when there is a reasonable expectation that the program will become cost-effective once fully implemented and active. It also means that a utility may recover the prudently incurred costs associated with an EE pilot that did not demonstrate cost-effectiveness during the pilot state. It does not relieve the utilities from the requirement to design programs to be cost-effective.

Cost-effectiveness Required at the Measure Level. Southwest states that "[c]onsistent with the Gas EE Standard, cost-effectiveness was performed at the portfolio and program levels." Southwest has proposed a number of measures that are not individually cost-effective, for inclusion in programs that are cost-effective on an overall basis.

The Company is mistaken in its assertion that, under the Gas EE Standard, cost-effectiveness is required at only the portfolio and program levels. For example, R14-2-2509 provides an extensive list of the data on cost-effectiveness that must be reported for "each Commission-approved DSM program *and measure*," while R14-2-2512 lists the type of data that may be included when analyzing "a DSM program's *or DSM measure's* cost-effectiveness." (Emphasis added.) The language of the Gas Energy Efficiency Rules plainly indicates that cost-effectiveness is required at the measure level.

Impact of Non-cost-effective Measures. Staff believes that dispensing with the requirement for measure-level cost-effectiveness could harm overall cost-effectiveness. While a portfolio or program may remain cost-effective, even when non-cost-effective measures are

included, the inclusion of measures with benefit-cost ratios below 1.0 necessarily dilutes the cost-effectiveness of the program or portfolio as a whole.

Issues for Natural Gas Measure Cost-effective Generally. Staff notes that there are fewer opportunities to save natural gas cost-effectively, than there are for electricity. The reasons for this include the following: (i) fewer appliances are natural-gas powered, in both Residential and Non-residential settings; (ii) natural gas prices have been lower in recent years, making the costs avoided through energy efficiency lower and lowering cost-effectiveness for natural gas measures generally; and (iii) specifically in Arizona, the generally warmer climate means a lower demand for natural gas for heating in many areas of the state. Despite these more limited savings opportunities, Staff believes that it is required by the Gas EE Rules, and is in the ratepayers' best interest, to design and maintain energy efficiency measures and programs in as cost-effective a manner as possible.

Cost-effectiveness of New Measures/Programs. The new measures and programs proposed as part of the New Revised Plan are listed below, along with their benefit-cost ratio, as calculated by Staff. In order to be cost-effective, a measure must have a benefit-cost ratio greater than 1.0, meaning the costs (or benefits) of a measure must be greater than the costs associated with purchasing and installing the measure.

Analysis and Recommendations. Staff's analysis indicates that three of the proposed measures for existing programs have a benefit-cost ratio of higher than 1.0, making them cost-effective. Staff recommends that Duct Insulation and Duct Sealing, Dishwasher (Low Temp): Single Tank Conveyor, and Dishwasher (Low Temp): Multi Tank Conveyor be approved.

With respect to the Residential and Business Assessment pilot programs, the available information and data do not support a conclusion that either program would provide cost-effective savings. Staff recommends against approval of both programs.

One of the measures associated with the Residential Assessments direct install component, the Lavatory Aerator, approaches cost-effectiveness, having a benefit-cost ratio of 0.95. Taking into account avoided environmental costs, the value of which has not been monetized, but which is greater than zero, the Lavatory Aerator is likely to be cost-effective in practice, if the associated program costs are low enough. Staff recommends that the Lavatory Aerator measure be added to the SGB Residential Rebates Program and/or the SGB Homes Program, if such an addition can be done on a cost-effective basis.

Program Name/New Measures	Benefit-Cost Ratio
Residential Sector	
<i>SGB Residential Rebates</i>	
• Condensing Water Heater	0.52
• Lavatory Faucet	0.51
• Boiler	0.50
• Duct Insulation and Duct Sealing	1.19

<i>SGB Homes</i>	
• Condensing Water Heater	0.61
• Clothes Dryer	0.70
<i>SGB Residential Energy Assessments</i>	
• Energy audits; also provides direct install efficient showerheads and faucets	Southwest states that, as a pilot, this program need not be cost-effective. Data provided on direct install measures, but not on assessments.
• Low-flow showerhead	0.76
• Lavatory aerator	0.95
• Kitchen aerator	0.85
Non-residential Sector	
<i>SGB Business Rebates</i>	
• Steam Boiler	0.51
• Large Vat Fryer	0.78
• Convection Oven	0.81
• Dishwasher (Low Temp): Single Tank Conveyor	1.09
• Dishwasher (Low Temp): Multi Tank Conveyor	1.22
<i>SGB Custom Business Rebates</i>	
	No new measures.
<i>SGB Business Energy Assessments</i>	
• Energy Audits	Southwest states that, as a pilot, this program need not be cost-effective. Data not provided.
<i>SGB Distributed Generation</i>	
	N/A No new measures.
Low-Income Sector	
<i>SGB Low-Income Energy Conservation</i>	
	N/A No new measures.
Educational Sector	
<i>SGB Energy Education (includes Conservation Behavior program)</i>	
• Print and Radio	An educational measure. No way to directly measure benefits relative to costs.

Renewable Sector	
<i>SGB Solar Thermal Rebates</i>	
	N/A Renewable measures are not required to be cost-effective.

Implementation Plan Programs

A. Smarter Greener Better Residential Rebates (“SGB Residential Rebates”)

Description. *SGB Residential Rebates* is an existing program targeting Residential customers. Rebates are offered to residential customers on qualified program measures and mailed to participating customers upon proof-of-purchase and installation.

New *SGB Residential Rebates* Measures. The following new measures have been proposed for the *SGB Residential Rebates* program as part of the New Revised Plan:

- **Condensing Water Heater**
- **Lavatory Faucet**
- **Boiler**
- **Duct Insulation and Duct Sealing**

B. Smarter Greener Better Homes (“SGB Homes”)

Description. *SGB Homes* is an existing program targeting Residential customers. Rebates are offered to home builders who build ENERGY STAR® certified homes and install program-eligible ENERGY STAR® measures. The program is available to all builders of new single-family subdivision and custom homes and individually metered multi-family homes featuring natural gas water and space heating.

New *SGB Homes* Measures. The following new measures have been proposed for the *SGB Homes* program as part of the New Revised Plan:

- **Condensing Water Heater**
- **Clothes Dryer**

C. Smarter Greener Better Residential Energy Assessments (Pilot “SGB Residential Energy Assessments”)

Description. *SGB Residential Energy Assessments* is proposed as a new pilot program targeting Residential customers. Southwest proposes a joint residential energy assessment (energy audit) program with Arizona Public Service for the program’s first year, and expects to partner with Salt River Project and/or Tucson Electric Power during future program years. All three of these utilities serve in Southwest’s Arizona service territory and have already developed

their own residential energy audit programs. For all participating homes with natural gas water and space heating, Southwest would pay rebates to homeowners for a portion of contractor costs and will provide direct-install measures such as smart low-flow showerheads and faucet accessories (aerators) and information for the *SGB Residential Rebates* program.

New *SGB Residential Energy Assessments (Pilot) Measures*. The new measures associated with this proposed pilot program are as follows:

- **Energy Audit Direct Install of:**
- **Efficient showerheads**
- **Lavatory aerators**
- **Kitchen aerators**

D. *Smarter Greener Better Business Rebates ("SGB Business Rebates")*

Description. *SGB Business Rebates* is an existing program targeting Non-residential customers. Rebates are offered to non-residential customers on qualified program measures and mailed to participating customers upon proof-of-purchase and installation.

The following new measures have been proposed for the *SGB Business Rebates* program as part of the New Revised Plan:

- **Steam Boiler**
- **Large Vat Fryer**
- **Convection Oven**
- **Dishwasher (Low Temp): Single Tank Conveyor**
- **Dishwasher (Low Temp): Multi Tank Conveyor**

E. *Smarter Greener Better Custom Business Rebates ("SGB Custom Rebates")*

Description. The *SGB Customer Rebates* program would offer incentives to non-residential customers based on achieved annual energy savings. This program was proposed as part of the pending Modified Plan. Southwest is not proposing any changes to the pending program.

Measures. 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, 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 practice.

F. Smarter Greener Better Business Energy Assessments (Pilot) ("SGB Business Energy Assessments")

Description. The *SGB Business Energy Assessments* program would offer up to \$5,000 per non-residential customer to aid in offsetting the cost of conducting a comprehensive energy assessment (energy audit) for all, or a substantial portion of the customer's premises. The audit must meet or exceed the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Level 2, energy audit standards. The energy audit would study a customer's existing equipment and building envelope and identify potential energy conservation measures to reduce overall energy consumption and increase energy efficiency.

New SGB Business Energy Assessments (Pilot) Measure. The new measure associated with this proposed pilot program is as follows:

- **Energy Audit**

G. Smarter Greener Better Distributed Generation ("SGB Distributed Generation")

Description. The *SGB Distributed Generation* program promotes the installation of high efficiency Combined Heat and Power ("CHP") technologies, and targets large commercial and industrial customers in the Company's Arizona service territory. CHP uses a primary energy source to produce both electric energy and useful process heat. CHP systems are configured to recapture the waste heat and use it for space heating, water heating, industrial steam loads, air conditioning, humidity control, water cooling, product drying or any other thermal need. The rebates are based upon the size and efficiency of the system being installed and range from \$400 to \$500 per kW.

Measures. The *SGB Distributed Generation* program offers rebates for individual non-residential projects meeting program criteria. Southwest has not proposed new measures for this program. Southwest has proposed an increase in this program's budget. Given the large size of the projects, the savings available and the recent increased program activity, the proposed increase is reasonable.

H. Smarter Greener Better Low-Income Energy Conservation ("SGB LIEC")

Description. The *SGB LIEC* program provides income-qualified residential customers with money-saving weatherization measures that reduce energy use in their homes. The program is available to households with annual incomes less than 150 percent of the federal poverty income guidelines, and is administered by Southwest in conjunction with the Arizona Governor's Office on Energy Policy (OEP – formerly referred to as the Arizona Energy Office). The OEP manages the Department of Energy's statewide Weatherization Assistance Program in Arizona and sub-contracts with local community agencies to install home weatherization measures. The home weatherization measures focus on four major categories: 1) duct repair; 2) infiltration control; 3) insulation (including attic, duct and floor); and 4) repair or replacement of appliances that are not operational or pose a health hazard.

Measures. Southwest has not proposed new measures for the *SGB LIEC* program. As part of the Modified Plan it was proposed that the program's eligibility be tied to that of the federal Low-Income Home Energy Assistance Program ("LIHEAP"), to expand eligibility and ease administration. Currently, LIHEAP's eligibility level is equal to 200% of the federal poverty level.

I. Smarter Greener Better Energy Education (Pilot) ("SGB Energy Education" formerly "SGB Conservation Behavior")

Description. The SGB Energy Education Program includes the SGB Conservation Behavior program addressed in the pending Staff Report and proposed order relating to the Modified Plan. As part of the New Revised Plan, Southwest is proposing to increase spending for the Conservation Behavior measure from \$200,000 to \$375,000, and to expand participation from 23,000 to 50,000. In addition, as part of the New Revised Plan, Southwest is proposing to spend \$175,000 on print and radio marketing. The expanded participation and the addition of print and radio advertising would increase the total proposed spending for the Energy Education (formerly the Conservation Behavior) program from \$200,000 (in the Modified Plan) to \$550,000 (for the New Revised Plan).

New Measure. Print and radio marketing have been proposed as a new measure.

Recommendation. Staff calculated the benefit-cost ratio for the Conservation Behavior program component at 1.24, as part of its evaluation of the Modified Plan. The increased participation proposed by Southwest should increase overall energy savings for the Southwest portfolio of programs. Staff recommends in favor of expanding the Conservation Behavior component of the Energy Education Program from 23,000 to 50,000 participants and in favor of increasing the budget for this component from \$200,000 to \$375,000.

The Print and Radio marketing measure, however, would not produce direct and verifiable savings, and appears to be an unnecessary added expense for a portfolio with an already substantial Outreach budget. Staff recommends against the Print and Radio marketing measure, and against the \$175,000 in funding proposed for this measure.

J. Smarter Greener Better Solar Thermal Rebates ("SGB Solar")

Description. Rebates will be offered to residential and non-residential customers on qualified solar thermal systems, used for water heating or pool heating, 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 will be realized throughout the life of the solar thermal systems.

The *SGB Solar* program was addressed in the Staff Report and proposed order relating to the Modified Plan, which is pending. No new measures were proposed for this program in the

New Revised Plan. Staff notes that, as a renewable program, neither the program nor its constituent measures are required to be cost-effective.

Implementation Plan Savings

The Southwest Implementation Plan, including new measures proposed in the New Revised Plan, is designed to achieve savings of approximately 3,597,767 therms or therm equivalents, based on the measures and programs proposed by the Company. Based on the estimated savings above, and on Staff's recommendations with respect to the New Revised Plan, Staff's revised estimate of savings is 3,294,517 therms or therm equivalents.

Revised Budget

Recommendation. Staff recommends against approval of two programs and most of the new measures proposed by the Company in the New Revised Plan. If the Commission agrees with Staff's recommendations, the proposed budget should be adjusted to accord with the modifications. Below, Staff recommends a revised budget for the Southwest portfolio that is reflective of its recommendations regarding the proposed measures and programs. This lower budget is also taken into account in Staff's calculation of its revised DSMS.

Smarter Greener Better ("SGB") Program	Company Proposed Budget	Staff Proposed Budget
Residential		
SGB Residential Rebates	\$5,500,000	\$4,389,000
SGB Homes	\$4,000,000	\$3,664,000
SGB Residential Energy Assessments	\$700,000	0
Total Residential	\$10,200,000	\$8,053,000
Non-residential		
SGB Business Rebates	\$2,000,000	\$1,956,000
SGB Custom Business Rebates	\$150,000	\$150,000
SGB Business Energy Assessments	\$700,000	0
SGB Distributed Generation	\$1,750,000	\$1,750,000
Total Non-residential	\$4,600,000	\$3,856,000
Low-Income		
SGB Low-Income Weatherization	\$450,000	\$450,000
Low-Income Bill Assistance	\$200,000	\$200,000
Total Low-Income	\$650,000	\$650,000
Education		
SGB Energy Education	\$550,000	\$375,000
Total Education	\$550,000	\$375,000
Renewable Energy Resource Technology		
SGB Solar Thermal Rebates	\$500,000	\$500,000
Total Renewable Energy Resource Technology	\$500,000	\$500,000
Total EE and RET Plan	\$16,500,000	\$13,434,000

Measurement, Evaluation, and Research ("MER")

Reporting shall be done in accordance with the Gas Energy Efficiency Rules, Section R14-2-2515.

Bill Impacts

Based on the modifications recommended by Staff, Staff recommends a DSMS of \$0.02069 per therm. The table below shows the bill impacts associated with the existing, Company-proposed, and Staff-proposed DSMS levels:

Monthly Bill Impacts: Seasonal and Annual	Winter	Summer	Annual
Average Therm Usage/month	39	11	25
Current DSMS			
\$0.00200	\$0.08	\$0.02	\$0.05
Proposed DSMS			
Southwest *			
\$0.02552	\$1.00	\$0.28	\$0.64
Staff			
\$0.02069	\$0.81	\$0.23	\$0.52

*Based on budget proposed in the New Revised Plan.

Summary of Recommendations

Reporting and Discontinuance

- Staff recommends that the Company file biannually concerning the performance of the measures included in its implementation plan, listing any measures which have ceased to be cost-effective and indicating why they have ceased to be cost-effective. The reports would be due in April and October of each year (covering six months of data) until further order of the Commission.
- Staff also recommends that any measures which cease to be cost-effective should be discontinued as part of the implementation plan.

DSMS Reset

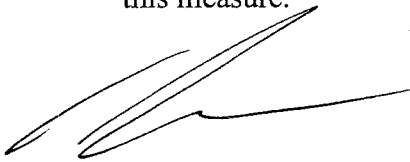
- Staff recommends the DSMS reset be done as part of the current docket, and that the DSMS include the following: (i) the existing DSM bank balance; (ii) projected spending through 2013 for all existing programs and measures, and any programs and measures approved as part of the Modified or New and Revised EE and RET Plans.
- Staff recommends that the DSMS be reset to \$0.02069 per therm.

Overall Budget

- Staff recommends that the budget increase proposed for the New Revised Plan be adjusted to reflect any Commission-ordered changes, including measures or programs that are modified or not approved for inclusion in Southwest's Implementation Plan.

Energy Education Program

- Staff recommends in favor of expanding the Conservation Behavior component of the Energy Education Program from 23,000 to 50,000 participants and in favor of increasing the budget for this component from \$200,000 to \$375,000.
- Staff recommends against approval of the Print and Radio marketing measure proposed for the Energy Education Program, and against the \$175,000 in funding associated with this measure.



Steven M. Olea
Director
Utilities Division

SMO:JMK:lhM\RM

ORIGINATOR: Julie McNeely-Kirwan

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BEFORE THE ARIZONA CORPORATION COMMISSION

- GARY PIERCE
Chairman
- BOB STUMP
Commissioner
- SANDRA D. KENNEDY
Commissioner
- PAUL NEWMAN
Commissioner
- BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION)
 OF SOUTHWEST GAS CORPORATION)
 FOR APPROVAL OF AN ENERGY)
 EFFICIENCY AND RENEWABLE ENERGY)
 RESOURCE TECHNOLOGY PORTFOLIO)
 IMPLEMENTATION PLAN, AND FOR)
 APPROVAL TO REVISE THE RATE)
 COLLECTED THROUGH ITS DEMAND-)
 SIDE MANAGEMENT ADJUSTOR)
 MECHANISM)

DOCKET NO. G-01551A-11-0344
 DECISION NO. _____
ORDER

Open Meeting
 April 24 and 25, 2012
 Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Southwest Gas Corporation ("Southwest" or "the Company") is engaged in providing natural gas service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.

2. Southwest serves approximately 991,000 customers in Arizona, including approximately 950,000 Residential customers and 40,000 Commercial customers, along with a smaller number of Industrial, Irrigation, Transportation and Other customers. Southwest serves natural gas customers in the following counties: Cochise, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pima, Pinal and Yuma.

...

1 The New Revised Plan

2 3. On September 13, 2011, in compliance with the rate case Settlement Agreement,
3 Southwest filed an Application for Approval of its Energy Efficiency and Renewable Energy
4 Resource Technology Portfolio Implementation Plan ("New Revised Plan"). The New Revised
5 Plan application was filed in Docket No. G-01551A-11-0344.

6 Background

7 4. The Modified Plan. On November 12, 2010, Southwest filed an initial
8 implementation plan as part of its rate case (Docket No. G-01551A-10-0458, "Rate Case Docket").
9 The parties (with the exception of the Residential Utility Consumer Office) entered in a Settlement
10 Agreement on July 15, 2011, which was later approved by the Commission in Decision No. 72723
11 (January 6, 2012). As part of the Settlement Agreement, the Company provided supplemental EE
12 information resulting in the Modified EE and RET Plan ("Modified Plan"). The focus of the
13 Modified Plan was a group of cost-effective measures intended to achieve savings of 1.25 million
14 therms within nine months of approval, as required under the terms of the Settlement Agreement.
15 The Modified Plan was addressed in a Staff Report and proposed order docketed on September 30,
16 2011 in the Rate Case Docket. The Staff Report and Proposed Order are pending and have not
17 been decided.

18 5. The Settlement Agreement included the following commitment by Southwest, with
19 respect to the New and Revised EE and RET Plan:

20 *"In order to increase the customer annual energy savings that are being agreed to*
21 *as part of this Agreement, Southwest Gas shall file in a new docket within 60 days*
22 *of filing this Agreement a new and revised EE and RET Implementation Plan*
23 *pursuant to A.A.C. R14-2-2501 et seq. setting forth a plan for how it proposes to*
24 *comply with the energy savings goals set forth therein. The new and revised EE*
and RET Implementation Plan will be incremental to the modified EE and RET
Plan measures that are being committed to by Southwest Gas as part of this
Agreement."

25 6. Southwest filed the New Revised Plan, addressed by this proposed order, in
26 compliance with the above commitment.

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1 Scope of the Proposed Order

2 7. New Measures and Programs. In this proposed order, although existing and
3 previously addressed programs will be described to provide a summary of the portfolio as a whole,
4 the focus of the analysis and recommendations herein will be the two new programs and 17 new
5 measures proposed in the New Revised Plan. (The 17 new measures being proposed are
6 associated with both existing and proposed new programs.)

7 8. Cost-effectiveness: Reporting and Discontinuance. Cost-effectiveness will be
8 evaluated at the measure level. Cost-effectiveness for measures already reviewed will not be
9 revisited. Staff has recommended that the Company file biannual reports concerning the
10 performance of the measures included in its implementation plan, listing any measures which have
11 ceased to be cost-effective and indicating why they have ceased to be cost-effective. The biannual
12 measure report would be in addition to the reporting requirements of R14-2-2509.A. Staff has also
13 recommended that any measures which cease to be cost-effective should be discontinued as part of
14 the implementation plan.

15 9. DSM adjustor rate. On January 30, 2012, in compliance with Decision No. 60532,
16 Southwest filed, to reset its DSM surcharge ("DSMS") (Docket No. G-01551A-12-0037).¹
17 Southwest requested an increase from the current \$0.00200 to \$0.00704 per therm for \$4.8 million
18 in anticipated spending, which is what the Company anticipates spending from April 1, 2012
19 through March 31, 2013 absent action on either the Modified Plan or New Revised Plans. Should
20 the New Revised Plan with its associated \$16.5 million budget be approved, Southwest requests an
21 increase to \$0.02552. This amount takes into account the currently over-collected DSM bank
22 balance and surcharge accruals through March 2012.

23 10. Staff has recommended the DSMS reset be done as part of the current docket, and
24 that the DSMS include the following: (i) the existing DSM bank balance; (ii) projected spending
25 through 2013 for all existing programs and measures, and any programs and measures approved as
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¹ In the New Revised Plan (September 2011), Southwest had requested a reset to "approximately" \$0.02673 per therm.

1 part of the Modified or New Revised Plans; and (iii) the costs of the Residential Financing
2 Program approved in April 2011 (Decision No. 72256).

3 11. New Programs and Measures. The table below lists all the programs, existing or
4 proposed, in the Southwest portfolio. Listed, by program, and in bold, are the new measures
5 proposed as part of the New Revised Plan. The two new pilot programs are also indicated, and are
6 also in bold print. The new programs and measures were the focus of Staff's cost-effectiveness
7 analysis.

Program Name	Existing, or New	Pending	New Measures
<i>Residential Sector</i>			
<i>SGB Residential Rebates</i>	Existing		<ul style="list-style-type: none"> • Condensing Water Heater • Lavatory Faucet • Boiler • Duct Insulation and Duct Sealing
<i>SGB Homes</i>	Existing		<ul style="list-style-type: none"> • Condensing Water Heater² • Clothes Dryer
<i>SGB Residential Energy Assessments</i>	New (pilot)		<ul style="list-style-type: none"> • Energy audits; provides direct install: • efficient showerheads; • lavatory aerators; • kitchen aeraerators
<i>Non-residential Sector</i>			
<i>SGB Business Rebates</i>	Existing		<ul style="list-style-type: none"> • Steam Boiler • Large Vat Fryer • Convection Oven • Dishwasher (Low Temp): Single Tank Conveyor • Dishwasher (Low Temp): Multi Tank Conveyor
<i>SGB Custom Business Rebates</i>	Proposed as part of the Modified EE and RET Plan (pending)		N/A
<i>SGB Business Energy Assessments</i>	New (pilot)		<ul style="list-style-type: none"> • Energy Audits
<i>SGB Distributed Generation</i>	Existing		N/A
<i>Low-Income Sector</i>			
<i>SGB Low-Income Energy Conservation</i>	Existing		N/A
<i>Educational Sector</i>			
<i>SGB Energy Education</i>	Proposed as part of the Modified EE and RET Plan (pending)		<ul style="list-style-type: none"> • Print and Radio
<i>Renewable Sector</i>			
<i>SGB Solar Thermal Rebates</i>	Proposed as part of the Modified EE and RET Plan (pending)		N/A

27 ² The condensing water heater is proposed for both the Residential Rebates program and the Homes program. In cases
28 where the Company is proposing the same energy efficient measure for more than one program, cost-effectiveness is
evaluated separately for each program. Program costs vary from program to program, and can significantly impact the
benefit-cost ratio, meaning that a measure could be a cost-effective part of one program, but not another.

1 Total Implementation Plan Budget

2 12. Southwest is proposing an overall budget of \$16.5 million, as compared to the
 3 existing budget of approximately \$4.8 million and the \$8.4 million budget proposed for the
 4 Modified Plan. The \$16.5 million budget, below, includes: (i) existing programs and measures;
 5 (ii) programs and measures proposed as part of the pending Modified Plan; and (iii) programs and
 6 measures proposed as part of the New Revised Plan.

7 13. The budget table lists projected costs by program and category.

8 Smarter Greener Better ("SGB") Program	Rebates	Administration	Outreach	Delivery	MV&E	Total Cost
9 Residential						
10 SGB Residential Rebates	\$3,853,350	\$41,250	\$330,000	\$1,192,900	\$82,500	\$5,500,000
11 SGB Homes	\$3,199,948	\$160,052	\$480,000	\$80,000	\$80,000	\$4,000,000
12 SGB Residential Energy Assessments	\$165,000	\$267,500	\$133,750	\$107,000	\$26,750	\$700,000
13 Total Residential	\$7,218,298	\$468,802	\$943,750	\$1,379,900	\$189,250	\$10,200,000
14 Non-residential						
15 SGB Business Rebates	\$1,102,270	\$90,000	\$222,730	\$495,000	\$90,000	\$2,000,000
16 SGB Custom Business Rebates	\$65,000	\$5,000	\$20,000	\$55,000	\$5,000	\$150,000
17 SGB Business Energy Assessments	\$350,000	\$17,500	\$105,000	\$175,000	\$52,500	\$700,000
18 SGB Distributed Generation	\$1,250,000	\$50,000	\$200,000	\$200,000	\$50,000	\$1,750,000
19 Total Non- residential	\$2,767,270	\$162,500	\$547,730	\$925,000	\$197,500	\$4,600,000
20 Low-Income						
21 SGB Low- Income Weatherization	\$373,500	\$67,500	\$9,000	\$0	\$0	\$450,000
22 Low-Income Bill Assistance	\$0	\$0	\$0	\$200,000	\$0	\$200,000
23 Total Low- Income	\$373,500	\$67,500	\$9,000	\$0	\$0	\$650,000
24 Education						
25 SGB Energy Education	\$0	\$60,000	\$482,500	\$0	\$7,500	\$550,000
26 Total Education	\$0	\$60,000	\$482,500	\$0	\$7,500	\$550,000
27 Renewable Energy Resource Technology						
28 SGB Solar	\$350,000	\$15,000	\$60,000	\$67,500	\$7,500	\$500,000

1	Thermal Rebates						
2	Total Renewable Energy Resource Technology	\$350,000	\$15,000	\$60,000	\$67,500	\$7,500	\$500,000
3							
4	Total EE and RET Plan	\$10,709,068	\$773,802	\$2,042,980	\$2,372,400	\$401,750	\$16,500,000

5

6 14. The budget comparison table, below, shows the differences between the proposed

7 budget for the New Revised Plan and the proposed budget for the Modified Plan. As previously

8 noted, the pending Modified Plan proposes a budget of approximately \$8.4 million, while the New

9 Revised Plan would bring the total budget to \$16.5 million.

10 **Comparison of Proposed Budgets: New Revised Plan (Current Application) versus Modified Plan (Pending Application)**

11	Residential Rebates	\$5,500,000	New Revised Plan (New Revised Plan)
12		\$3,027,770	Modified Plan
13		\$2,472,230	increase
14	Homes	\$4,000,000	New Revised Plan (New Revised Plan)
15		\$2,260,500	Modified Plan
16		\$1,739,500	increase
17	Residential Energy Assessments	\$700,000	increase (new program)
18	Business Rebates	\$2,000,000	New Revised Plan (New Revised Plan)
19		\$891,275	Modified Plan
20		\$1,108,725	increase
21	Custom Business Rebates	\$150,000	New Revised Plan (New Revised Plan)
22		\$100,000	Modified Plan
23		\$50,000	increase
24	Business Energy Assessments	\$700,000	increase (new program)
25	Distributed Generation	\$1,750,000	New Revised EPlan (New Revised Plan)
26		\$757,000	Modified Plan
27		\$993,000	increase
28	Low-Income	\$650,000	unchanged
	Education	\$550,000	New Revised Plan (New Revised Plan)
		\$200,000	Modified Plan
		\$350,000	increase

Solar Thermal Rebates	\$500,000	unchanged
Total difference	\$8,113,455	Total increase, from Modified Plan to New Revised Plan
Total Proposed Spending	\$16,500,000	

15. Recommendation. Staff has recommended that the budget increase proposed for the New Revised Plan be adjusted to reflect any Commission-ordered changes, including measures or programs that are modified or not approved for inclusion in Southwest's Implementation Plan.

Cost-Effectiveness Issues

16. Summary. There are two general concerns regarding the cost-effectiveness of the new programs and measures proposed by Southwest in its New Revised Plan. One is that the Company has asserted that, under the Rules, pilot programs need not be cost-effective. The other is that the Company has proposed a significant number of individual measures with benefit-cost ratios well below what is required for cost-effectiveness.

17. Pilot Programs Required to be Cost-effective. In its application, Southwest asserts that "[p]ursuant to Section R14-2-2512(G) of the Gas EE Standard, cost-effectiveness is not required for pilot programs." Staff disagrees with this interpretation of the Gas EE Standard.. In fact, R14-2-2503(A) states that "[a]n affected utility shall design *each DSM program* to be cost-effective." There is no language exempting pilot programs from this requirement.

18. The language in R14-2-2512(G) does state however, that "[r]esearch and development and pilot programs are not required to demonstrate cost-effectiveness." This narrow exemption allows a program to be continued beyond the pilot stage, even if cost-effectiveness was not demonstrated, when there is a reasonable expectation that the program will become cost-effective once fully implemented and active. It also means that a utility may recover the prudently incurred costs associated with an EE pilot that did not demonstrate cost-effectiveness during the pilot state. It does not relieve the utilities from the requirement to design programs to be cost-effective.

19. Cost-effectiveness Required at the Measure Level. Southwest states that "[c]onsistent with the Gas EE Standard, cost-effectiveness was performed at the portfolio and

1 program levels.” Southwest has proposed a number of measures that are not individually cost-
2 effective, for inclusion in programs that are cost-effective on an overall basis.

3 20. The Company is mistaken in its assertion that, under the Gas EE Standard, cost-
4 effectiveness is required at only the portfolio and program levels. For example, R14-2-2509
5 provides an extensive list of the data on cost-effectiveness that must be reported for “each
6 Commission-approved DSM program *and measure*,” while R14-2-2512 lists the type of data that
7 may be included when analyzing “a DSM program’s *or DSM measure’s* cost-effectiveness.”
8 (Emphasis added.) The language of the Gas Energy Efficiency Rules plainly indicates that cost-
9 effectiveness is required at the measure level.

10 21. Impact of Non-cost-effective Measures. Staff believes that dispensing with the
11 requirement for measure-level cost-effectiveness could harm overall cost-effectiveness. While a
12 portfolio or program may remain cost-effective, even when non-cost-effective measures are
13 included, the inclusion of measures with benefit-cost ratios below 1.0 necessarily dilutes the cost-
14 effectiveness of the program or portfolio as a whole.

15 22. Issues for Natural Gas Measure Cost-effective Generally. Staff notes that there are
16 fewer opportunities to save natural gas cost-effectively, than there are for electricity. The reasons
17 for this include the following: (i) fewer appliances are natural-gas powered, in both Residential
18 and Non-residential settings; (ii) natural gas prices have been lower in recent years, making the
19 costs avoided through energy efficiency lower and lowering cost-effectiveness for natural gas
20 measures generally; and (iii) specifically in Arizona, the generally warmer climate means a lower
21 demand for natural gas for heating in many areas of the state. Despite these more limited savings
22 opportunities, Staff believes that it is required by the Gas Energy Efficiency Rules, and is in the
23 ratepayers’ best interest, to design and maintain energy efficiency measures and programs in as
24 cost-effective a manner as possible.

25 23. Cost-effectiveness of New Measures/Programs. The new measures and programs
26 proposed as part of the New Revised Plan are listed below, along with their benefit-cost ratio, as
27 calculated by Staff. In order to be cost-effective, a measure must have a benefit-cost ratio greater
28 ...

1 than 1.0, meaning the costs (or benefits) of a measure must be greater than the costs associated
2 with purchasing and installing the measure.

3 24. Analysis and Recommendations. Staff's analysis indicates that three of the
4 proposed measures for existing programs have a benefit-cost ratio of higher than 1.0, making them
5 cost-effective. Staff has recommended that Duct Insulation and Duct Sealing, Dishwasher (Low
6 Temp): Single Tank Conveyor, and Dishwasher (Low Temp): Multi Tank Conveyor be approved.

7 25. With respect to the Residential and Business Assessment pilot programs, the
8 available information and data do not support a conclusion that either program would provide cost-
9 effective savings. Staff has recommended against approval of both programs.

10 26. One of the measures associated with the Residential Assessments direct install
11 component, the Lavatory Aerator, approaches cost-effectiveness, having a benefit-cost ratio of
12 0.95. Taking into account avoided environmental costs, the value of which has not been
13 monetized, but which is greater than zero, the Lavatory Aerator is likely to be cost-effective in
14 practice, if the associated program costs are low enough. Staff has recommended that the Lavatory
15 Aerator measure be added to the SGB Residential Rebates Program and/or the SGB Homes
16 Program, if such an addition can be done on a cost-effective basis.

Program Name/New Measures	Benefit-Cost Ratio
Residential Sector	
<i>SGB Residential Rebates</i>	
• Condensing Water Heater	0.52
• Lavatory Faucet	0.51
• Boiler	0.50
• Duct Insulation and Duct Sealing	1.19
<i>SGB Homes</i>	
• Condensing Water Heater	0.61
• Clothes Dryer	0.70
<i>SGB Residential Energy Assessments</i>	
• Energy audits; also provides direct install efficient showerheads and faucets	Southwest states that, as a pilot, this program need not be cost-effective. Data provided on direct install measures, but not on assessments.
• Low-flow showerhead	0.76
• Lavatory aerator	0.95
• Kitchen aerator	0.85

1	Non-residential Sector	
2	<i>SGB Business Rebates</i>	
3	• Steam Boiler	0.51
4	• Large Vat Fryer	0.78
5	• Convection Oven	0.81
6	• Dishwasher (Low Temp): Single Tank Conveyor	1.09
7	• Dishwasher (Low Temp): Multi Tank Conveyor	1.22
8	<i>SGB Custom Business Rebates</i>	
9		No new measures.
10	<i>SGB Business Energy Assessments</i>	
11	• Energy Audits	Southwest states that, as a pilot, this program need not be cost-effective. Data not provided.
12	<i>SGB Distributed Generation</i>	
13	N/A	No new measures.
14	Low-Income Sector	
15	<i>SGB Low-Income Energy Conservation</i>	
16	N/A	No new measures.
17	Educational Sector	
18	<i>SGB Energy Education (includes Conservation Behavior program)</i>	
19	• Print and Radio	An educational measure. No way to directly measure benefits relative to costs.
20	Renewable Sector	
21	<i>SGB Solar Thermal Rebates</i>	
22	N/A	Renewable measures are not required to be cost-effective.

Implementation Plan Programs

A. Smarter Greener Better Residential Rebates ("SGB Residential Rebates")

27. Description. *SGB Residential Rebates* is an existing program targeting Residential customers. Rebates are offered to residential customers on qualified program measures and mailed to participating customers upon proof-of-purchase and installation.

28. New SGB Residential Rebates Measures. The following new measures have been proposed for the *SGB Residential Rebates* program as part of the New Revised Plan:

- **Condensing Water Heater**
- **Lavatory Faucet**
- **Boiler**
- **Duct Insulation and Duct Sealing**

B. Smarter Greener Better Homes ("SGB Homes")

29. Description. *SGB Homes* is an existing program targeting Residential customers. Rebates are offered to home builders who build ENERGY STAR® certified homes and install program-eligible ENERGY STAR® measures. The program is available to all builders of new single-family subdivision and custom homes and individually metered multi-family homes featuring natural gas water and space heating.

30. New SGB Homes Measures. The following new measures have been proposed for the *SGB Homes* program as part of the New Revised Plan:

- **Condensing Water Heater**
- **Clothes Dryer**

C. Smarter Greener Better Residential Energy Assessments (Pilot "SGB Residential Energy Assessments")

31. Description. *SGB Residential Energy Assessments* is proposed as a new pilot program targeting Residential customers. Southwest proposes a joint residential energy assessment (energy audit) program with Arizona Public Service for the program's first year, and expects to partner with Salt River Project and/or Tucson Electric Power during future program years. All three of these utilities serve in Southwest's Arizona service territory and have already developed their own residential energy audit programs. For all participating homes with natural gas water and space heating, Southwest would pay rebates to homeowners for a portion of contractor costs and will provide direct-install measures such as smart low-flow showerheads and faucet accessories (aerators) and information for the *SGB Residential Rebates* program.

32. New SGB Residential Energy Assessments (Pilot) Measures. The new measures associated with this proposed pilot program are as follows:

- **Energy AuditDirect Install of:**
- **Efficient showerheads**

- Lavatory aerators
- Kitchen aerators

D. Smarter Greener Better Business Rebates ("SGB Business Rebates")

33. Description. *SGB Business Rebates* is an existing program targeting Non-residential customers. Rebates are offered to non-residential customers on qualified program measures and mailed to participating customers upon proof-of-purchase and installation.

34. The following new measures have been proposed for the *SGB Business Rebates* program as part of the New and Revised EE and RET Plan:

- Steam Boiler
- Large Vat Fryer
- Convection Oven
- Dishwasher (Low Temp): Single Tank Conveyor
- Dishwasher (Low Temp): Multi Tank Conveyor

E. Smarter Greener Better Custom Business Rebates ("SGB Custom Rebates")

35. Description. The *SGB Customer Rebates* program would offer incentives to non-residential customers based on achieved annual energy savings. This program was proposed as part of the pending Modified Plan. Southwest is not proposing any changes to the pending program.

36. Measures. 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, 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 practice.

F. Smarter Greener Better Business Energy Assessments (Pilot) ("SGB Business Energy Assessments")

37. Description. The *SGB Business Energy Assessments* program would offer up to \$5,000 per non-residential customer to aid in offsetting the cost of conducting a comprehensive

1 energy assessment (energy audit) for all, or a substantial portion of the customer's premises. The
2 audit must meet or exceed the American Society of Heating, Refrigerating, and Air Conditioning
3 Engineers (ASHRAE) Level 2, energy audit standards. The energy audit would study a customer's
4 existing equipment and building envelope and identify potential energy conservation measures to
5 reduce overall energy consumption and increase energy efficiency.

6 38. New SGB Business Energy Assessments (Pilot) Measure. The new measure
7 associated with this proposed pilot program is as follows:

- 8 • **Energy Audit**

9
10 G. Smarter Greener Better Distributed Generation ("SGB Distributed Generation")

11 39. Description. The *SGB Distributed Generation* program promotes the installation of
12 high efficiency Combined Heat and Power ("CHP") technologies, and targets large commercial
13 and industrial customers in the Company's Arizona service territory. CHP uses a primary energy
14 source to produce both electric energy and useful process heat. CHP systems are configured to
15 recapture the waste heat and use it for space heating, water heating, industrial steam loads, air
16 conditioning, humidity control, water cooling, product drying or any other thermal need. The
17 rebates are based upon the size and efficiency of the system being installed and range from \$400 to
18 \$500 per kW.

19 40. Measures. The *SGB Distributed Generation* program offers rebates for individual
20 non-residential projects meeting program criteria. Southwest has not proposed new measures for
21 this program. Southwest has proposed an increase in this program's budget. Given the large size
22 of the projects, the savings available and the recent increased program activity, the proposed
23 increase is reasonable.

24 H. Smarter Greener Better Low-Income Energy Conservation ("SGB LIEC")

25 41. Description. The *SGB LIEC* program provides income-qualified residential
26 customers with money-saving weatherization measures that reduce energy use in their homes. The
27 program is available to households with annual incomes less than 150 percent of the federal
28 poverty income guidelines, and is administered by Southwest in conjunction with the Arizona

1 Governor's Office on Energy Policy (OEP – formerly referred to as the Arizona Energy Office).
2 The OEP manages the Department of Energy's statewide Weatherization Assistance Program in
3 Arizona and sub-contracts with local community agencies to install home weatherization
4 measures. The home weatherization measures focus on four major categories: 1) duct repair; 2)
5 infiltration control; 3) insulation (including attic, duct and floor); and 4) repair or replacement of
6 appliances that are not operational or pose a health hazard.

7 42. Measures. Southwest has not proposed new measures for the *SGB LIEC* program.
8 As part of the Modified Plan it was proposed that the program's eligibility be tied to that of the
9 federal Low-Income Home Energy Assistance Program ("LIHEAP"), to expand eligibility and
10 ease administration. Currently, LIHEAP's eligibility level is equal to 200% of the federal poverty
11 level.

12 I. Smarter Greener Better Energy Education (Pilot) ("SGB Energy Education" formerly "SGB
13 Conservation Behavior")

14 43. Description. The SGB Energy Education Program includes the SGB Conservation
15 Behavior program addressed in the pending Staff Report and proposed order relating to the
16 Modified Plan. As part of the New Revised Plan, Southwest is proposing to increase spending for
17 the Conservation Behavior measure from \$200,000 to \$375,000, and to expand participation from
18 23,000 to 50,000. In addition, as part of the New Revised Plan, Southwest is proposing to spend
19 \$175,000 on print and radio marketing. The expanded participation and the addition of print and
20 radio advertising would increase the total proposed spending for the Energy Education (formerly
21 the Conservation Behavior) program from \$200,000 (in the Modified Plan) to \$550,000 (for the
22 New Revised Plan).

23 44. New Measure. Print and radio marketing have been proposed as a new measure.

24 45. Recommendation. Staff calculated the benefit-cost ratio for the Conservation
25 Behavior program component at 1.24, as part of its evaluation of the Modified Plan. The increased
26 participation proposed by Southwest should increase overall energy savings for the Southwest
27 portfolio of programs. Staff has recommended in favor of expanding the Conservation Behavior

28 ...

1 component of the Energy Education Program from 23,000 to 50,000 participants and in favor of
2 increasing the budget for this component from \$200,000 to \$375,000.

3 46. The Print and Radio marketing measure, however, would not produce direct and
4 verifiable savings, and appears to be an unnecessary added expense for a portfolio with an already
5 substantial Outreach budget. Staff has recommended against the Print and Radio marketing
6 measure, and against the \$175,000 in funding proposed for this measure.

7 J. Smarter Greener Better Solar Thermal Rebates ("SGB Solar")

8 47. Description. Rebates will be offered to residential and non-residential customers on
9 qualified solar thermal systems, used for water heating or pool heating, upon proof-of-purchase
10 and installation. The program objective is to increase public awareness of the benefits of solar
11 thermal systems and to reduce customer natural gas usage by providing economically beneficial
12 rebates to install the systems. Long-term customer energy savings will be realized throughout the
13 life of the solar thermal systems.

14 48. The SGB Solar program was addressed in the Staff Report and proposed order
15 relating to the Modified Plan, which is pending. No new measures were proposed for this program
16 in the New Revised Plan. Staff notes that, as a renewable program, neither the program nor its
17 constituent measures are required to be cost-effective.

18 Implementation Plan Savings

19 49. The Southwest Implementation Plan, including new measures proposed in the New
20 Revised Plan, is designed to achieve savings of approximately 3,597,767 therms or therm
21 equivalents, based on the measures and programs proposed by the Company. Based on the
22 estimated savings above, and on Staff's recommendations with respect to the New Revised Plan,
23 Staff's revised estimate of savings is 3,294,517 therms or therm equivalents.

24 Revised Budget

25 50. Recommendation. Staff has recommended against approval of two programs and
26 most of the new measures proposed by the Company in the New Revised Plan. If the Commission
27 agrees with Staff's recommendations, the proposed budget should be adjusted to accord with the
28 modifications. Below, Staff has recommended a revised budget for the Southwest portfolio that is

1 reflective of its recommendations regarding the proposed measures and programs. This lower
2 budget is also taken into account in Staff's calculation of its revised DSMS.

Smarter Greener Better ("SGB") Program	Company Proposed Budget	Staff Proposed Budget
Residential		
SGB Residential Rebates	\$5,500,000	\$4,389,000
SGB Homes	\$4,000,000	\$3,664,000
SGB Residential Energy Assessments	\$700,000	0
Total Residential	\$10,200,000	\$8,053,000
Non-residential		
SGB Business Rebates	\$2,000,000	\$1,956,000
SGB Custom Business Rebates	\$150,000	\$150,000
SGB Business Energy Assessments	\$700,000	0
SGB Distributed Generation	\$1,750,000	\$1,750,000
Total Non-residential	\$4,600,000	\$3,856,000
Low-Income		
SGB Low-Income Weatherization	\$450,000	\$450,000
Low-Income Bill Assistance	\$200,000	\$200,000
Total Low-Income	\$650,000	\$650,000
Education		
SGB Energy Education	\$550,000	\$375,000
Total Education	\$550,000	\$375,000
Renewable Energy Resource Technology		
SGB Solar Thermal Rebates	\$500,000	\$500,000
Total Renewable Energy Resource Technology	\$500,000	\$500,000
Total EE and RET Plan	\$16,500,000	\$13,434,000

19
20 Measurement, Evaluation, and Research ("MER")

21 51. Reporting shall be done in accordance with the Gas Energy Efficiency Rules,
22 Section R14-2-2515.

23 Bill Impacts

24 52. Based on the modifications recommended by Staff, Staff has recommended a
25 DSMS of \$0.02069 per therm. The table below shows the bill impacts associated with the existing,
26 Company-proposed, and Staff-proposed DSMS levels:

27 ...

28 ...

Monthly Bill Impacts: Seasonal and Annual	Winter	Summer	Annual
Average Therm Usage/month	39	11	25
Current DSMS			
\$0.00200	\$0.08	\$0.02	\$0.05
Proposed DSMS			
Southwest *			
\$0.02552	\$1.00	\$0.28	\$0.64
Staff			
\$0.02069	\$0.81	\$0.23	\$0.52

*Based on budget proposed in the New Revised Plan.

Summary of Recommendations

Reporting and Discontinuance

- Staff has recommended that the Company file biannually concerning the performance of the measures included in its implementation plan, listing any measures which have ceased to be cost-effective and indicating why they have ceased to be cost-effective. The reports would be due in April and October of each year (covering six months of data) until further order of the Commission.
- Staff has also recommended that any measures which cease to be cost-effective should be discontinued as part of the implementation plan.

DSMS Reset

- Staff has recommended the DSMS reset be done as part of the current docket, and that the DSMS include the following: (i) the existing DSM bank balance; (ii) projected spending through 2013 for all existing programs and measures, and any programs and measures approved as part of the Modified or New Revised Plans.
- Staff has recommended that the DSMS be reset to \$0.02069 per therm.

Overall Budget

- Staff has recommended that the budget increase proposed for the New Revised Plan be adjusted to reflect any Commission-ordered changes, including measures or programs that are modified or not approved for inclusion in Southwest's Implementation Plan.

Energy Education Program

- Staff has recommended in favor of expanding the Conservation Behavior component of the Energy Education Program from 23,000 to 50,000 participants and in favor of increasing the budget for this component from \$200,000 to \$375,000.
- Staff has recommended against approval of the Print and Radio marketing measure proposed for the Energy Education Program, and against the \$175,000 in funding associated with this measure.

CONCLUSIONS OF LAW

1
2 1. Southwest is an Arizona public service corporation within the meaning of Article
3 XV, Section 2, of the Arizona Constitution.

4 2. The Commission has jurisdiction over Southwest and over the subject matter of the
5 application.

6 3. The Commission, having reviewed the application and Staff's Memorandum dated
7 April 10, 2012, concludes that it is in the public interest to approve the New Revised Plan as
8 discussed herein.

ORDER

9
10 IT IS THEREFORE ORDERED that the Southwest Gas Corporation New Revised Plan be
11 approved, as discussed herein.

12 IT IS FURTHER ORDERED that the following measures be approved:

- 13 • Duct Insulation and Duct Sealing;
14 • Dishwasher (Low Temp): Single Tank Conveyor;
15 • Dishwasher (Low Temp): Multi Tank Conveyor;
 • Lavatory Aerator.

16 IT IS FURTHER ORDERED that the Lavatory Aerator measure, originally proposed as
17 part of the Residential Assessments program, be added to the SGB Residential Rebates Program
18 and/or the SGB Homes Program, if such an addition can be done on a cost-effective basis.

19 IT IS FURTHER ORDERED that Southwest Gas Corporation file a report biannually
20 concerning the performance of the measures included in its implementation plan, listing any
21 measures which have ceased to be cost-effective and indicating why they have ceased to be cost-
22 effective. The reports shall be due in April and October of each year until further order of the
23 Commission.

24 IT IS FURTHER ORDERED that any measures which cease to be cost-effective should be
25 discontinued as part of the implementation plan.

26 IT IS FURTHER ORDERED that the Conservation Behavior component of the Energy
27 Education Program be expanded from 23,000 to 50,000 participants, and that the budget for this
28 component be increased from \$200,000 to \$375,000.

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IT IS FURTHER ORDERED that the DSMS be reset to \$0.02069 per therm.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN

COMMISSIONER

COMMISSIONER

COMMISSIONER

COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON,
Executive Director of the Arizona Corporation Commission,
have hereunto, set my hand and caused the official seal of this
Commission to be affixed at the Capitol, in the City of Phoenix,
this _____ day of _____, 2012.

ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

SMO:JMK:lh\RM

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