



SOUTHWEST GAS CORPORATION

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AZ CORP COMMISSION
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March 31, 2004

Mr. Ernest Johnson
Arizona Corporation Commission
Utilities Division
1200 West Washington Street
Phoenix, AZ 85007

G-01551A-96-0596
G-01551A-98-0214
G-01551A-99-0288

Dear Mr. Johnson:

Southwest Gas Corporation (Southwest) herewith submits for filing an original and fifteen (15) copies of Southwest's Semi-Annual Demand Side Management Progress Report in redacted form. This report is being submitted in compliance with Decision Nos. 59685 issued in U-1551-96-596, 60967 issued in U-1551A-98-0214 and 61853 issued in G-01551A-99-0288.

Pursuant to discussions with members of the Utilities Division Staff, the Energy Advantage Plus section and the Appendix are considered to be confidential by Southwest and are designated as such. Southwest is providing you with a complete copy of the report, including the above-referenced pages, in an envelope marked "Confidential".

If you have any questions or comments on the attached report, please do not hesitate to contact me at 702-876-7163.

Respectfully submitted,

Debra S. Jacobson
Director/Government and State Regulatory Affairs

jjp

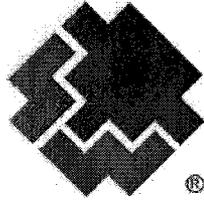
Enclosures

c ACC Compliance Division
Mr. Bob Gray, ACC

Arizona Corporation Commission
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SOUTHWEST GAS CORPORATION

**SEMI-ANNUAL
DEMAND SIDE MANAGEMENT
PROGRESS REPORT**

March 31, 2004

REDACTED

In accordance with the approvals received from the Arizona Corporation Commission in Docket Nos. U-1551-96-189 (Decision No. 59685), U-1551-96-596 (Decision No. 60352), and G-01551A-99-0288 (Decision No. 61853), Southwest Gas Corporation is submitting its Semi-annual Demand Side Management Progress Report.

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ENERGY ADVANTAGE PLUS PROGRAM

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LOW INCOME ENERGY CONSERVATION PROGRAM

Southwest is submitting its Semi-annual Demand Side Management (DSM) Progress Report (Report) on the Low Income Energy Conservation (LIEC) program. The Report is submitted in accordance with the approvals received from the Arizona Corporation Commission (ACC or Commission) in Docket No. G-01551A-99-0288 (Decision No. 61853).

The LIEC program originated in 1998. In July 1999, the Commission approved a two-year continuation of Southwest's LIEC program. The program is conducted by Southwest through the Arizona Energy Office's (AEO) statewide weatherization program. The AEO expanded its current contracts with community agencies to include funding from Southwest.

In June 2001, the Commission granted an extension of the program through June 2004. Changes were made to the program to include an increased funding level of \$350,000, as well as the addition of a health and safety category.

Program Activity

During the first half of the program year (July 1, 2003 – December 31, 2003), 67 households were served, with expenditures totaling \$177,677. These funds were spent in four major categories: (1) duct repair; (2) infiltration control; (3) attic insulation; and (4) the replacement of natural gas furnaces, which were not operational or posed a health hazard.

The AEO has continued its efforts in making this a cost-effective program. Every job submitted is carefully reviewed for accuracy of the work completed and the funding sources being charged. Because each agency has several funding sources with different guidelines, determining the appropriate source for each section of a job can be very complicated. The AEO and Southwest work closely with the agencies to find the best fit for all parties involved.

Program Promotion and Outreach

Southwest continues to use various communication methods to promote both the LIEC and Low Income Residential Assistance (LIRA) programs. The LIRA program provides discounted rates for natural gas service to qualifying customers. These methods include quarterly bill inserts in English and Spanish, sponsorship of an annual meeting with the agencies, and attendance at a variety of community events. In addition, an annual reminder letter along with a supply of LIRA applications, including LIEC information, is sent to approximately 150 community agencies statewide.

Program Costs

The annual program runs from July through June, as do the other federally-funded programs administered by the AEO. Table 4 shows the financial details by agency, for the first half of the 2003/2004 program year.

TABLE 4
Low Income Energy Conservation Program
Funding and Costs Incurred from July 2003 – December 2003

Agencies	Funding	Costs Incurred	(Over)/Under
City of Phoenix			
Materials & Labor	\$105,448	\$35,464	\$69,984
Administration	\$12,272	\$4,998	\$7,274
Subtotal City of Phoenix	\$117,720	\$40,462	\$77,258
Mesa			
Materials & Labor	\$4,250	\$1,660	\$2,590
Administration	\$500	\$166	\$334
Subtotal Mesa	\$4,750	\$1,826	\$2,924
MHRD			
Materials & Labor	\$76,500	\$74,629	\$1,871
Administration	\$9,000	\$8,364	\$636
Subtotal MHRD	\$85,500	\$82,993	\$2,507
TUL			
Materials & Labor	\$18,360	\$4,810	\$13,550
Administration	\$2,160	\$1,186	\$974
Subtotal TUL	\$20,520	\$5,996	\$14,524
Pima County			
Materials & Labor	\$7,380	\$0	\$7,380
Administration	\$600	\$0	\$600
Subtotal Pima County	\$7,980	\$0	\$7,980
SEAHRC			
Materials & Labor	\$8,925	\$3,505	\$5,420
Administration	\$1,050	\$1,050	\$0
Subtotal SEAHRC	\$9,975	\$4,555	\$5,420
CAHRA			
Materials & Labor	\$10,200	\$4,248	\$5,952
Administration	\$1,200	\$119	\$1,081
Subtotal CAHRA	\$11,400	\$4,367	\$7,033
WACOG			
Materials & Labor	\$46,602	\$9,705	\$36,897
Administration	\$5,253	\$1,173	\$4,080
Subtotal WACOG	\$51,855	\$10,878	\$40,977
Gila County			
Materials & Labor	\$20,400	\$14,900	\$5,500
Administration	\$2,400	\$2,950	(\$550)
Subtotal Gila County	\$22,800	\$17,850	\$4,950
Arizona Energy Office			
Administration	\$17,500	\$8,750	\$8,750
Total			
Materials & Labor	\$298,065	\$148,921	\$149,144
Administration	\$51,935	\$28,756	\$23,179
Grand Total	\$350,000	\$177,677	\$172,323

Note: Total program-year costs listed above were provided by the AEO and do not match the costs booked to Southwest's accounting system. Lag times exist from the time when work is completed, invoices are received, and invoices are paid/recorded.

The following table shows statistics about the homes weatherized.

TABLE 5	
Low Income Energy Conservation Program	
Program Year Statistics	
July 1, 2003 – December 31, 2003	
Total Number of Units	67
Income Categories	
< \$2,000	3
\$2,000 - \$3,999	4
\$4,000 - \$5,999	14
\$6,000 - \$7,999	11
\$8,000 - \$9,999	10
\$10,000 - \$11,999	9
\$12,000 - \$14,999	15
\$15,000 and Over	1
Children 2 years or under	6
Children 3 to 5 years	7
Number of elderly participants	23
Number of handicapped participants	32
Number of homebound participants	1

Special Projects

In order to increase the use and effectiveness of program funds, Southwest has allocated a portion (approximately \$60,000 annually) of the LIEC funds for highly cost-effective special projects. The LIEC Special Project(s) category is designed to make funds available for large, multi-family projects. All projects must follow the established program guidelines. The higher-than-normal savings from these projects help offset the less energy efficient health and safety measures included in the program and assist in keeping the LIEC program cost-effective overall.

Distribution of these funds is on a competitive basis using the following criteria:

1. Cost-effectiveness of the projects;
2. Partnerships with additional entities;
3. Agency production to date.

A review committee comprised of housing professionals from the AEO and Southwest, who are not directly administering the program, carefully review all applications and determine which projects are funded each program year. The proposals submitted by the October 31, 2003 due date were evaluated by the review committee on November 3, 2003. WACOG was awarded \$39,030 for the San Carlos Hotel (domicile for physically and mentally challenged low-income residents) project in Yuma, Arizona and the City of Phoenix was granted \$22,720 for the Morningside Villa Apartments project.

Training and Education

The AEO continues to enhance the training provided to both field and administrative personnel of the agencies conducting the statewide program. Southwest believes well-trained and experienced personnel are essential to a successful program. Listed below is a sample of the courses being conducted.

Peer-to-Peer Training

The LIEC program continues to leverage with the Arizona weatherization program's Peer-to-Peer training courses. These courses utilize the agencies that have the experience and skills needed to successfully implement the weatherization program. This knowledge is shared with other agencies throughout the state. This training consists of one-day classroom training and two to three days of field training. The crews being trained, work and learn with other crew members. The peer-to-peer technical training includes Pressure Diagnostic, Health and Safety, and Applied Building Science.

Pressure Diagnostic: This section of the course provides classroom and field training on testing and repairs of homes with air leakage and/or room pressure problems. The training includes the use of blower doors, manometers, smoke generators and duct air-tightness testing.

Health and Safety: This portion of the course provides classroom and field training on the testing and repair of possible safety problems. The training includes the use of blower doors and manometers.

Applied Building Science: This section of the course covers current building science theory and practical experience focused on building design, construction techniques, materials, and HVAC equipment. There is also a follow-up investigation to determine what effects these measures have on building occupants.

REM/Design Training

Training is also provided to the agencies on the use of the REM/design (Residential Analysis Software). This training instructs the attendees on the use of software for estimating annual heating, cooling, and water heating use, the potential savings of retrofit measures, and the cost-effectiveness of retrofit measures. The course is especially helpful for the Southwest program, because it is required to be cost-effective.

Peer-to-Peer Fiscal and Technical Procedures

The Arizona weatherization program has formed peer-to-peer working groups that allow the fiscal and technical staff from the agencies and the AEO to meet and discuss issues that arise in the program. Agencies are able to share solutions to common problems and other information.

Program Recommendation

Considering the merits of the current low-income weatherization program administered through the AEO and the benefits of leveraging funding sources, Southwest recommends a three-year continuation of the LIEC program at the funding level of \$350,000 annually (July 1, 2004 through June 30, 2007).

DEMAND SIDE MANAGEMENT ADJUSTER

Southwest is submitting its Report on the Demand Side Management Adjuster Mechanism (DSMAM). This Report is submitted in accordance with the Settlement Agreement approved by the ACC in Docket No. U-1551-96-596 (Decision No. 60352).

The DSMAM is designed to allow Southwest ongoing recovery of its DSM program costs. A total of \$1,190,888 was collected through the DSMAM surcharge in 2003. Table 6 presents the costs, recoveries/interest, and balance collected by quarter. Actual costs incurred (shown in previous cost tables by program) may vary from the costs recorded (shown below) for two reasons: (1) advances to program administrators; and (2) lag times. Lag times exist from the time when work is completed, invoices are received, and invoices are paid/recorded.

TABLE 6					
Arizona DSM Adjuster Mechanism					
Actual Costs and Recoveries Booked by Quarter for 2003					
Description	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Total
Energy Advantage Plus	\$ 177,482	\$ 330,582	\$ 91,713	\$ 296,138	\$ 895,915
Low Income Energy Conservation	50,252	66,640	87,500	63,795	268,187
Total - Costs Booked 2003	\$227,734	\$397,222	\$179,213	359,933	\$1,164,102
Total - Recoveries & Interest 2003	(\$529,995)	(\$225,996)	(\$120,935)	(\$313,963)	(\$1,190,888)
Balance Carried Over from 2002					\$388,862
Balance DSM Deferral Account as of December 31, 2003					\$362,076

On March 5, 2004, the Staff approved a revised adjuster rate of \$0.00486 per therm that was applied to Southwest residential customer (Schedule Nos. G-5, G-10, G-15, G-16 and G-20) bills beginning on April 1, 2004. The previously-approved rate used for during the last three quarters of 2003 and the first quarter of 2004 was \$0.00499 per therm. Southwest continues to calculate and report the DSMAM rate as established by the ACC.

DEMAND SIDE MANAGEMENT WORKSHOPS

The Commission issued Decision No. 65743 (Track B) on March 14, 2003. In that Decision, the Commission ordered Staff to facilitate a workshop process to explore the development of a DSM policy. Southwest has been actively participating in the continuing series of workshops.

At the first DSM Workshop held on October 30, 2003, the ACC requested that the utilities provide recommendations for the three best DSM opportunities in each of three customer classes: Residential, Commercial, and Industrial. Southwest recommended the programs listed in the following table.

DSM PROGRAM RECOMMENDATIONS		
Residential	Commercial	Industrial
R1* - Low-Income Energy Conservation	C1* - Food Service Equipment	I1* - Technology Information Center
R2* - Multi-Family New Construction	C2 - High-Efficiency Laundries	I2 - Distributed Generation
R3* - High-Efficiency Appliances in Retail Stores	C3 - Efficient Building Design	I3 - Irrigation Pumping
R4 - Single-Family New Construction		
*Top five programs		

Southwest prioritized the recommended programs and submitted more detailed concepts for the top five programs, knowing that even these five programs exceed the current DSM budget. Southwest provided a brief description of the other recommended programs.

Southwest notes that its currently approved DSM budget is \$1.25 million annually. With that amount, Southwest now conducts two programs: 1) Low-Income Energy Conservation (\$350,000); and 2) Energy Advantage Plus, a single-family new construction program conducted in the Tucson area (\$900,000). With its existing Commission-approved DSM funding level, Southwest suggests further evaluation of three programs for possible implementation in the future: 1) R1 - Low-Income Energy Conservation (\$350,000); 2) R2 - Multi-Family New Construction (\$800,000); and 3) I1 - Technology Information Center (\$35,000), for a total of \$1,185,000. Detailed energy savings for these three programs over a ten-year period was also submitted during the workshop process. If the ACC determines that Southwest should pursue some or all of the programs listed above, Southwest will provide more detailed cost-effectiveness analyses, implementation plans and funding levels.

APPENDIX A

**ENERGY ADVANTAGE PLUS PROGRAM
ENERGY SAVINGS**

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**SOUTHWEST GAS CORPORATION
ENERGY ADVANTAGE PLUS
AVERAGE ANNUAL ENERGY SAVINGS (mmBtu) PER HOME BY BUILDER**

Builder	<u>MEC to EA+ Standards</u>	<u>MEC to Final Design</u>
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The average annual energy savings are calculated at: (1) Model Energy Code (MEC) standards; (2) EA+ standards; and (3) the builder's final design.

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