

ORIGINAL  
OPEN MEETING



0000073749

MEMORANDUM  
RECEIVED

Arizona Corporation Commission<sup>410</sup>  
DOCKETED

2007 JUN -7 P 2:06

JUN -7 2007

TO: THE COMMISSION

FROM: Utilities Division

AZ CORP COMMISSION  
DOCKET CONTROL

DATE: June 7, 2007

DOCKETED BY	nr
-------------	----

RE: SOUTHWEST GAS CORPORATION – APPLICATION FOR APPROVAL OF ITS ENERGY STAR® HOME PROGRAM (A DEMAND SIDE MANAGEMENT PROGRAM PLAN) (DOCKET NO. G-01551A-04-0876)

On June 26, 2006, Southwest Gas Corporation (“Southwest”) filed an application for approval of its Energy Star® Home program, as required by Decision No. 68487. Decision No. 68487 required that the Company file detailed descriptions of its Demand-Side Management (“DSM”) programs within 120 days of the Commission’s February 23, 2006 Order approving rate changes effective March 1, 2006.

The Energy Star® program is an expansion and modification of the Energy Advantage Plus (“EAPlus”) program in existence since 1996. Energy Star® is one of seven DSM programs in Southwest’s 2006 Arizona Demand Side Management Program Plan (“Plan”). The program name was changed to Energy Star® to reflect new and higher standards for certification of energy efficient homes.

The Environmental Protection Agency (“EPA”), the International Energy Conservation Code (“IECC”), and the Residential Energy Services Network (“RESNET”) have introduced new, more stringent, guidelines for building and testing energy efficient homes. Changes in these guidelines, and changes in the housing market, have led to a decrease in program participation, as discussed below.

#### Program Description

Under the Energy Star® program, Southwest provides energy efficiency certification to single-family production homes in the Tucson area. Southwest works with residential home builders to assist them in constructing more energy efficient homes through enhancements to thermal shell construction, mechanical systems and field verification. No financial incentives are provided to participating builders.

In order to be certified, an Energy Star® home must be at least 15 percent more energy efficient than homes built under the current IECC. To be eligible to participate in the Southwest program, homes must use natural gas for home and water heating; builders must register with the EPA as Energy Star® partners and agree to build using Energy Star® standards.

In its program plan, Southwest originally proposed to increase the Energy Star® budget from \$250,000 to \$450,000, by shifting \$200,000 from the proposed Consumer Products program budget. (This shift would reduce the Consumer Products proposed program budget from \$1,000,000 to \$800,000.) The reallocation in funding from the Consumer Products program to the Energy Star® program was intended to take advantage of economies of scale provided by the new requirement that at least five Energy Star®-rated appliances be installed in each Energy Star® home.

Increased costs of compliance and a downturn in the housing market have reduced current participation in the Energy Star® program, but Southwest predicts that participation levels will recover and increase through 2009 (see below). For 2007, Southwest has reduced its proposed 2007 budget to \$350,000, proposing an increase to \$450,000 for 2008 and 2009. Staff recommends that the budget remain at \$250,000 for 2007, with increases to \$350,000 in 2008 and to \$450,000 in 2009, if participation improves to the extent currently predicted by Southwest.

#### Changes in the Housing Market and in Energy Star® Standards

##### Impacts on Participation and Plans for Expansion

The number of Energy Star® homes certified in 2006 was 2,555, rather than the 3,000 originally planned. For 2007, estimated program participation was originally set at 4,200 homes. Under the revised estimate for 2007, only 1,400 Energy Star® homes are anticipated to receive Energy Star® certification. Part of the original estimate of 4,200, approximately 800 homes, was to be achieved through expansion of the program to Cochise County, but those builders have decided not to participate in Energy Star® at this time, apparently due to increased costs of compliance. Participation by builders in the Tucson area has also decreased. Southwest is working to improve participation, and estimates that 3,000 Energy Star®-certified homes will be built in 2008 and 4,500 in 2009.

As part of its effort to increase participation, Southwest now plans to expand Energy Star® to the Phoenix metropolitan area. A Southwest study done in 2000 indicated that it would not be cost-effective to implement what was then the EAPlus program in Phoenix, because builders were already building at approximately 20 percent above the then-existing energy standards. Southwest believes that the newly increased costs of compliance and the current housing downturn have decreased above-standard building, and that the Phoenix housing market would now benefit from Energy Star® expansion to that area.

Staff recommends that Southwest continue to work toward expanding its Energy Star® program beyond the Tucson area, including both Cochise County and the Phoenix metropolitan area. Staff also recommends that Southwest continue to work toward improving builder participation in the Tucson area.

New Building Standards

The most significant changes in building standards impacting Energy Star® homes include the following: (i) the EPA has instituted a Thermal Bypass Checklist (“TBC”), which requires revised insulation and framing practices; homes must also include at least five Energy Star® lights, fans or appliances; (ii) the IECC has instituted higher efficiency standards with respect to windows; and (iii) RESNET has increased testing requirements, so that the percentage of tested homes is expected to increase from 15 percent to 25-30 percent.

Higher standards for compliance have increased the incremental cost of meeting Energy Star standards to \$500 to \$600 per home. Approximately \$200 of the additional costs arise from the requirement to install five Energy Star® appliances, while higher standards for insulation and framing account for most of the remaining increase. In homes with more than one story, or with cathedral ceilings, porches and lofts, the incremental cost of compliance could be as much as \$1,000.

Proposed Program Budget

As stated above, Southwest has decreased its proposed budget from \$450,000 to \$350,000 for 2007, increasing to \$450,000 in 2008 and 2009. Southwest has reallocated amounts within the budget from implementation to marketing, training, monitoring and administration; this is due to decreased participation and is intended to improve program visibility and address changes in building/testing standards. Below are the original and revised figures for each category, for 2007:

**Estimated 2007 Budgets, Energy Star® Home Program<sup>1</sup>**

Proposed Budgets	Original 2007	Revised 2007
Program Implementation <sup>2</sup>	\$380,800	\$175,000
Communication <sup>3</sup>	\$28,000	\$55,000
Outreach Events <sup>4</sup>	\$5,000	\$30,000
Training and Education <sup>5</sup>	\$16,800	\$52,000
Measurement and Evaluation <sup>6</sup>	\$13,000	\$28,000
Other Administrative Costs <sup>7</sup>	\$6,400	\$10,000
<b>Total</b>	<b>\$450,000</b>	<b>\$350,000</b>

<sup>1</sup> Budget allocations for 2008 and 2009 will be determined based on program needs.

<sup>2</sup> Inspections and testing.

<sup>3</sup> Newspapers, magazines and brochures.

<sup>4</sup> Trade shows, displays and handouts.

<sup>5</sup> Seminars and workshops.

<sup>6</sup> RESNET rating fees and REM/Rate® software.

<sup>7</sup> Office supplies and travel expenses.

Southwest's proposed budget for 2007 combines one-half its current \$250,000 budget, covering the first half of 2007, and one-half of its originally proposed budget of \$450,000, or \$225,000.

As stated above, Staff recommends that, for 2007, Energy Star® Home program funding be maintained at its existing level of \$250,000. Levels of participation in the program are currently much lower than anticipated and, in its March 31, 2007, semi-annual report, Southwest indicates that only \$159,311, was spent on the program in 2006, out of a \$250,000 annual budget. Staff also recommends increasing the proposed budget to \$350,000 for 2008 and to \$450,000 in 2009, if the level of participation increases as anticipated. Staff believes that a more gradual increase in budget will avoid concentrating DSM resources in a program where spending, and participation, are currently lower than anticipated, while also providing sufficient funding to expand the program and address changes in standards and increased costs of marketing.

Staff also recommends that the number of homes certified under the Energy Star® program be carefully tracked. If certification and participation levels remain low, Staff recommends that Southwest revisit the program to determine whether adjustments, including builder incentives, should be considered as a means of improving participation.

#### Marketing

In its September 30, 2006 semi-annual DSM report, Southwest stated that program communication was curtailed, because builders were aware of the program and did not require recruitment. In light of recent decreases in builder participation more active recruitment is necessary, and Southwest is increasing its marketing efforts in order to enlist more builders and encourage consumer demand for Energy Star® homes.

Southwest began advertising bimonthly in Tucson Lifestyle Magazine's *New Homes Guide* in February 2007, and is planning a Parade of Energy Star®/Green Homes for 2008. In addition, Southwest advertised in the December 2006 Southern Arizona Home Builders Association ("SAHBA") magazine. Southwest also plans to produce brochures for subdivision sites and to participate in the Southern Arizona Home Builder Association spring and fall home shows.

Staff recommends that Southwest continue marketing the Energy Star® program both in Tucson and in the areas where it intends to expand. Staff also recommends that Southwest monitor its marketing program to determine the most effective means of improving program participation and that spending on marketing be adjusted accordingly.

#### Delivery Strategy

The Energy Star® program is implemented by Southwest, through its Service Planning employees, with assistance from Southwest's DSM staff. Southwest also contracts with an

outside company for testing, inspections, training and plan analysis. In addition, the Arizona Department of Commerce Energy Office ("AEO") provides consultation and advice on educational activities and energy-efficient building practices with respect to Energy Star®.

Services provided to builders under the Energy Star® program fall primarily in the following three areas: (i) model plans are reviewed through the REM/Rate residential energy software, needed efficiency improvements are identified and a specification package including required efficiencies is determined; (ii) supervisors, trade workers and construction staff are trained in groups and individually on building standards, while sales staff is trained in marketing Energy Star® homes; and (iii) homes constructed under the program undergo inspection and testing with respect to insulation, windows and framing, ductwork and infiltration.

#### Monitoring and Evaluation

As discussed in the *New Building Standards* section, Southwest currently tests 15 percent of the homes, and believes that this will rise to 25-30 percent under the new standards. Infiltration and ductwork are checked with blower door and Duct Blaster® equipment, and builders have to sign off on the thermal bypass checklist, agreeing to repair any defects. With respect to the overall program, RESNET evaluates Southwest's performance on an annual basis, and Southwest files semi-annual DSM reports with the Commission, reporting on participation and certification levels, among other items. (See the section on Reporting Requirements, below.)

#### Cost-Benefit Analysis

##### Cost-Effectiveness

Southwest's revised estimate for the cost-effectiveness ratio of the Energy Star® program is 4.39. Southwest's estimate derives, primarily, from gas and electric savings arising from insulation upgrades and thermal bypass measures that improve the thermal envelope. Southwest also includes data from Energy Star®-certified appliances, such as dishwashers, lighting, and high-efficiency gas water heaters. Southwest used data from the REM/Rate® modeling software to establish the energy savings used to measure cost-effectiveness for its Energy Star® proposal.

Staff relied on energy savings from improvements to the thermal envelope in establishing a cost-effectiveness ratio of 4.15. Since builders can choose from a list of Energy Star qualified appliances, and since the cost-effectiveness of many of these appliances has yet to be clearly established, Staff did not include appliances in its evaluation.

##### Environmental Benefits

Southwest has also listed significant reductions in carbon dioxide, nitrogen oxide and sulfur oxide emissions, along with reduced water consumption. These estimates on environmental savings were provided on both a yearly and lifetime basis (see Appendix C of the application). Because lower participation levels impacted Southwest's energy and

environmental savings estimates, Southwest updated its estimates for environmental benefits. The revised estimates are included below:

#### REVISED ENVIRONMENTAL BENEFITS

Annual Savings	CO <sub>2</sub> (lbs)	NO <sub>x</sub> (lbs)	So <sub>x</sub> (lbs)	H <sub>2</sub> O (gallons)
2007	4,689,593	880	22	1,191,576
2008	10,049,128	1,885	47	2,553,377
2009	15,073,692	2,827	71	3,830,066
<b>Lifetime Savings</b>	691,932,969	129,785	3,245	175,812,848

#### Reporting Requirements

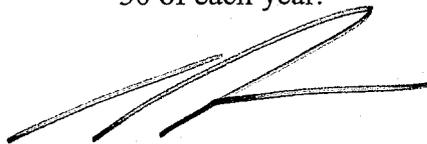
Southwest reports its residential new construction program in its semi-annual demand-side management reports filed with the Commission. Through 2006, the program was reported on as Energy Advantage Plus, but with the new energy efficiency standards in place as of 2007, the name has changed to Energy Star®. The semi-annual reports to the Commission include information on (i) actual program costs; (ii) participation, inspections and energy savings; (iii) program communications; (iv) program evaluation; and (v) future developments. Staff recommends that the semi-annual DSM reports should continue and should include reporting on Southwest's efforts to expand the program beyond the Tucson area. Staff also recommends that Southwest include information on its marketing efforts in the semi-annual reports, including information on where marketing is directed.

There has been confusion regarding the filing deadlines for the Southwest Gas' semi-annual DSM reports. For purposes of clarification, Staff recommends that Southwest file its semi-annual reports on March 31 and September 30 of each year.

#### Summary of Staff Recommendations

- Staff recommends that the budget remain at \$250,000 for 2007, with increases to \$350,000 in 2008 and to \$450,000 in 2009, if participation improves to the extent currently predicted by Southwest.
- Staff recommends that Southwest continue to work toward expanding its Energy Star® program beyond the Tucson area, including both Cochise County and the Phoenix metropolitan area. Staff also recommends that Southwest continue to work toward improving builder participation in the Tucson area.
- Staff also recommends that the number of homes certified under the Energy Star® program be carefully tracked. If certification and participation levels remain low, Staff recommends that Southwest revisit the program to determine whether adjustments, including builder incentives, should be considered as a means of improving participation.

- Staff recommends that Southwest continue marketing the Energy Star® both in Tucson and in the areas where it intends to expand. Staff also recommends that Southwest monitor its marketing program to determine the most effective means of improving program participation and that spending on marketing be adjusted accordingly.
- Staff recommends that the semi-annual DSM reports should continue and should include reporting on Southwest's efforts to expand the program beyond the Tucson area. Staff also recommends that Southwest include information on its marketing efforts in the semi-annual reports, including information on where marketing is directed.
- Staff recommends that Southwest file its semi-annual reports on March 31 and September 30 of each year.



Ernest G. Johnson  
Director  
Utilities Division

EGJ:JMK:tdp\JMA

ORIGINATOR: Julie McNeely-Kirwan

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

**BEFORE THE ARIZONA CORPORATION COMMISSION**

MIKE GLEASON  
Chairman  
WILLIAM A. MUNDELL  
Commissioner  
JEFF HATCH-MILLER  
Commissioner  
KRISTEN K. MAYES  
Commissioner  
GARY PIERCE  
Commissioner

IN THE MATTER OF THE APPLICATION )  
OF SOUTHWEST GAS CORPORATION – )  
FILING FOR APPROVAL OF ITS ENERGY )  
STAR® HOME CENTER PROGRAM )

DOCKET NO. G-01551A-04-0876

DECISION NO. \_\_\_\_\_

ORDER

Open Meeting  
June 26 and 27 2007  
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Southwest Gas Corporation (“Southwest”) is engaged in providing natural gas within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.
2. On June 26, 2006, Southwest Gas Corporation (“Southwest”) filed an application for approval of its Energy Star® Home program, as required by Decision No. 68487. Decision No. 68487 required that the Company file detailed descriptions of its DSM programs within 120 days of the Commission’s February 23, 2006 Order approving rate changes effective March 1, 2006.
3. The Energy Star® program is an expansion and modification of the Energy Advantage Plus (“EAPlus”) program in existence since 1996. Energy Star® is one of seven demand-side management (“DSM”) programs in Southwest’s 2006 Arizona Demand Side Management Program Plan (“Plan”). The program name was changed to Energy Star® to reflect new and higher standards for certification of energy efficient homes.

1           4.     The Environmental Protection Agency (“EPA”), the International Energy  
2 Conservation Code (“IECC”), and the Residential Energy Services Network (“RESNET”) have  
3 introduced new, more stringent, guidelines for building and testing energy efficient homes.  
4 Changes in these guidelines, and changes in the housing market, have led to a decrease in program  
5 participation, as discussed below.

6           5.     Under the Energy Star® program, Southwest provides energy efficiency  
7 certification to single-family production homes in the Tucson area. Southwest works with  
8 residential home builders to assist them in constructing more energy efficient homes through  
9 enhancements to thermal shell construction, mechanical systems and field verification. No  
10 financial incentives are provided to participating builders.

11          6.     In order to be certified, an Energy Star home must be at least 15 percent more  
12 energy efficient than homes built under the current International Energy Conservation Code  
13 (“IECC”). To be eligible to participate in the Southwest program, homes must use natural gas for  
14 home and water heating; builders must register with the EPA as Energy Star partners and agree to  
15 build using Energy Star standards.

16          7.     In its program plan, Southwest originally proposed to increase the Energy Star®  
17 budget from \$250,000 to \$450,000, by shifting \$200,000 from the proposed Consumer Products  
18 program budget. (This shift would reduce the Consumer Products proposed program budget from  
19 \$1,000,000 to \$800,000.) The reallocation in funding from the Consumer Products program to the  
20 Energy Star® program was intended to take advantage of economies of scale provided by the new  
21 requirement that at least five Energy Star®-rated appliances be installed in each Energy Star®  
22 home.

23          8.     Increased costs of compliance and a downturn in the housing market have reduced  
24 current participation in the Energy Star® program, but Southwest predicts that participation levels  
25 will recover and increase through 2009 (see below). For 2007, Southwest has reduced its proposed  
26 2007 budget to \$350,000, proposing an increase to \$450,000 for 2008 and 2009. Staff has  
27 recommended that the budget remain at \$250,000 for 2007, with increases to \$350,000 in 2008 and  
28 to \$450,000 in 2009, if participation improves to the extent currently predicted by Southwest.

1           9.       The number of Energy Star® homes certified in 2006 was 2,555, rather than the  
2 3,000 originally planned. For 2007, estimated program participation was originally set at 4,200  
3 homes. Under the revised estimate for 2007, only 1,400 Energy Star® homes are anticipated to  
4 receive Energy Star® certification. Part of the original estimate of 4,200, approximately 800  
5 homes, was to be achieved through expansion of the program to Cochise County, but those  
6 builders have decided not to participate in Energy Star® at this time, apparently due to increased  
7 costs of compliance. Participation by builders in the Tucson area has also decreased. Southwest is  
8 working to improve participation, and estimates that 3,000 Energy Star®-certified homes will be  
9 built in 2008 and 4,500 in 2009.

10           10.       As part of its effort to increase participation, Southwest now plans to expand  
11 Energy Star® to the Phoenix metropolitan area. A Southwest study done in 2000 indicated that it  
12 would not be cost-effective to implement what was then the EAPlus program in Phoenix, because  
13 builders were already building at approximately 20 percent above the then-existing energy  
14 standards. Southwest believes that the newly increased costs of compliance and the current  
15 housing downturn have decreased above-standard building, and that the Phoenix housing market  
16 would now benefit from Energy Star® expansion to that area.

17           11.       Staff has recommended that Southwest continue to work toward expanding its  
18 Energy Star® program beyond the Tucson area, including both Cochise County and the Phoenix  
19 metropolitan area. Staff has recommended that Southwest continue to work toward improving  
20 builder participation in the Tucson area.

21           12.       The most significant changes in building standards impacting Energy Star® homes  
22 include the following: (i) the EPA has instituted a Thermal Bypass Checklist (“TBC”), which  
23 requires revised insulation and framing practices; homes must also include at least five Energy  
24 Star® lights, fans or appliances; (ii) the IECC has instituted higher efficiency standards with  
25 respect to windows; and (iii) RESNET has increased testing requirements, so that the percentage  
26 of tested homes is expected to increase from 15 percent to 25-30 percent.

27           13.       Higher standards for compliance have increased the incremental cost of meeting  
28 Energy Star standards to \$500 to \$600 per home. Approximately \$200 of the additional costs arise

1 from the requirement to install five Energy Star® appliances, while higher standards for insulation  
 2 and framing account for most of the remaining increase. In homes with more than one story, or  
 3 with cathedral ceilings, porches and lofts, the incremental cost of compliance could be as much as  
 4 \$1,000.

5 14. As stated above, Southwest has decreased its proposed budget from \$450,000 to  
 6 \$350,000 for 2007, increasing to \$450,000 in 2008 and 2009. Southwest has reallocated amounts  
 7 within the budget from implementation to marketing, training, monitoring and administration; this  
 8 is due to decreased participation and is intended to improve program visibility and address changes  
 9 in building/testing standards. Below are the original and revised figures for each category, for  
 10 2007:

11 Estimated 2007 Budgets, Energy Star® Home Program<sup>1</sup>

Proposed Budgets	Original 2007	Revised 2007
Program Implementation <sup>2</sup>	\$380,800	\$175,000
Communication <sup>3</sup>	\$28,000	\$55,000
Outreach Events <sup>4</sup>	\$5,000	\$30,000
Training and Education <sup>5</sup>	\$16,800	\$52,000
Measurement and Evaluation <sup>6</sup>	\$13,000	\$28,000
Other Administrative Costs <sup>7</sup>	\$6,400	\$10,000
Total	\$450,000	\$350,000

12  
13  
14  
15  
16  
17  
18  
19  
20  
21 15. Southwest's proposed budget for 2007 combines one-half its current \$250,000  
 22 budget, covering the first half of 2007, and one-half of its originally proposed budget of \$450,000,  
 23 or \$225,000.  
 24

25 <sup>1</sup> Budget allocations for 2008 and 2009 will be determined based on program needs.

26 <sup>2</sup> Inspections and testing.

27 <sup>3</sup> Newspapers, magazines and brochures.

28 <sup>4</sup> Trade shows, displays and handouts.

<sup>5</sup> Seminars and workshops.

<sup>6</sup> RESNET rating fees and REM/Rate® software.

<sup>7</sup> Office supplies and travel expenses.

1           16.     As stated above, Staff has recommended that, for 2007, Energy Star® Home  
2 program funding be maintained at its existing level of \$250,000. Levels of participation in the  
3 program are currently much lower than anticipated and, in its March 31, 2007, semi-annual report,  
4 Southwest indicates that only \$159,311, was spent on the program in 2006, out of a \$250,000  
5 annual budget. Staff also recommends increasing the proposed budget to \$350,000 for 2008 and to  
6 \$450,000 in 2009, if the level of participation increases as anticipated. Staff believes that a more  
7 gradual increase in budget will avoid concentrating DSM resources in a program where spending,  
8 and participation, are currently lower than anticipated, while also providing sufficient funding to  
9 expand the program and address changes in standards and increased costs of marketing.

10           17.     Staff has also recommended that the number of homes certified under the Energy  
11 Star® program be carefully tracked. If certification and participation levels remain low, Staff has  
12 recommended that Southwest revisit the program to determine whether adjustments, including  
13 builder incentives, should be considered as a means of improving participation.

14           18.     In its September 30, 2006 semi-annual DSM report, Southwest stated that program  
15 communication was curtailed, because builders were aware of the program and did not require  
16 recruitment. In light of recent decreases in builder participation more active recruitment is  
17 necessary, and Southwest is increasing its marketing efforts in order to enlist more builders and  
18 encourage consumer demand for Energy Star® homes.

19           19.     Southwest began advertising bimonthly in Tucson Lifestyle Magazine's New  
20 Homes Guide in February 2007, and is planning a Parade of Energy Star®/Green Homes for 2008.  
21 In addition, Southwest advertised in the December 2006 Southern Arizona Home Builders  
22 Association ("SAHBA") magazine. Southwest also plans to produce brochures for subdivision  
23 sites and to participate in the Southern Arizona Home Builder Association spring and fall home  
24 shows.

25           20.     Staff has recommended that Southwest continue marketing the Energy Star®  
26 program both in Tucson and in the areas where it intends to expand. Staff has also recommended  
27 that Southwest monitor its marketing program to determine the most effective means of improving  
28 program participation and that spending on marketing be adjusted accordingly.

1           21.     The Energy Star® program is implemented by Southwest, through its Service  
2 Planning employees, with assistance from Southwest's DSM staff. Southwest also contracts with  
3 an outside company for testing, inspections, training and plan analysis. In addition, the Arizona  
4 Department of Commerce Energy Office ("AEO") provides consultation and advice on  
5 educational activities and energy-efficient building practices with respect to Energy Star®.

6           22.     Services provided to builders under the Energy Star® program fall primarily in the  
7 following three areas: (i) model plans are reviewed through the REM/Rate residential energy  
8 software, needed efficiency improvements are identified and a specification package including  
9 required efficiencies is determined; (ii) supervisors, trade workers and construction staff are  
10 trained in groups and individually on building standards, while sales staff is trained in marketing  
11 Energy Star® homes; and (iii) homes constructed under the program undergo inspection and  
12 testing with respect to insulation, windows and framing, ductwork and infiltration.

13           23.     As discussed in the New Building Standards section, Southwest currently tests 15  
14 percent of the homes, and believes that this will rise to 25-30 percent under the new standards.  
15 Infiltration and ductwork are checked with blower door and Duct Blaster® equipment, and  
16 builders have to sign off on the thermal bypass checklist, agreeing to repair any defects. With  
17 respect to the overall program, RESNET evaluates Southwest's performance on an annual basis,  
18 and Southwest files semi-annual DSM reports with the Commission, reporting on participation and  
19 certification levels, among other items. (See the section on Reporting Requirements, below.)

20           24.     Southwest's revised estimate for the cost-effectiveness ratio of the Energy Star®  
21 program is 4.39. Southwest's estimate derives, primarily, from gas and electric savings arising  
22 from insulation upgrades and thermal bypass measures that improve the thermal envelope.  
23 Southwest also includes data from Energy Star®-certified appliances, such as dishwashers,  
24 lighting, and high-efficiency gas water heaters. Southwest used data from the REM/Rate®  
25 modeling software to establish the energy savings used to measure cost-effectiveness for its  
26 Energy Star® proposal.

27           25.     Staff relied on energy savings from improvements to the thermal envelope in  
28 establishing a cost-effectiveness ratio of 4.15. Since builders can choose from a list of Energy

1 Star® qualified appliances, and since the cost-effectiveness of many of these appliances has yet to  
2 be clearly established, Staff did not include appliances in its evaluation.

3 26. Southwest has also listed significant reductions in carbon dioxide, nitrogen oxide  
4 and sulfur oxide emissions, along with reduced water consumption. These estimates on  
5 environmental savings were provided on both a yearly and lifetime basis (see Appendix C of the  
6 application). Because lower participation levels impacted Southwest's energy and environmental  
7 savings estimates, Southwest updated its estimates for environmental benefits. The revised  
8 estimates are included below:

9 **REVISED ENVIRONMENTAL BENEFITS**

Annual Savings	CO <sub>2</sub> (lbs)	NO <sub>x</sub> (lbs)	So <sub>x</sub> (lbs)	H <sub>2</sub> O (gallons)
2007	4,689,593	880	22	1,191,576
2008	10,049,128	1,885	47	2,553,377
2009	15,073,692	2,827	71	3,830,066
<b>Lifetime Savings</b>	<b>691,932,969</b>	<b>129,785</b>	<b>3,245</b>	<b>175,812,848</b>

14 27. Southwest reports its residential new construction program in its semi-annual  
15 demand-side management reports filed with the Commission. Through 2006, the program was  
16 reported on as Energy Advantage Plus, but with the new energy efficiency standards in place as of  
17 2007, the name has changed to Energy Star®. The semi-annual reports to the Commission include  
18 information on (i) actual program costs; (ii) participation, inspections and energy savings; (iii)  
19 program communications; (iv) program evaluation; and (v) future developments. Staff has  
20 recommended that the semi-annual DSM reports should continue and should include reporting on  
21 Southwest's efforts to expand the program beyond the Tucson area. Staff has also recommended  
22 that Southwest include information on its marketing efforts in the semi-annual reports, including  
23 information on where marketing is directed.

24 28. There has been confusion regarding the filing deadlines for the Southwest Gas'  
25 semi-annual DSM reports. For purposes of clarification, Staff has recommended that Southwest  
26 file its semi-annual reports on March 31 and September 30 of each year.  
27  
28





1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

IT IS FURTHER ORDERED that Southwest file its semi-annual reports on March 31 and September 30 of each year.

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 BRIAN C. McNEIL, 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 \_\_\_\_\_, 2007.

\_\_\_\_\_  
BRIAN C. McNEIL  
Executive Director

DISSENT: \_\_\_\_\_

DISSENT: \_\_\_\_\_

EGJ:JMK:tdp\JMA

1 SERVICE LIST FOR: Southwest Gas Corporation  
DOCKET NO. G-01551A-04-0876

2

3 Ms. Debra S. Jacobsen  
4 Director, Government and  
State Regulatory Affairs  
5 Southwest Gas Corporation  
5241 Spring Mountain Road  
6 Post Office Box 98510  
7 Las Vegas, Nevada 89193-8510

8 Mr. Ernest G. Johnson  
Director, Utilities Division  
9 Arizona Corporation Commission  
1200 West Washington  
10 Phoenix, Arizona 85007

11 Mr. Christopher C. Kempley  
12 Chief Counsel  
Arizona Corporation Commission  
13 1200 West Washington  
14 Phoenix, Arizona 85007

15

16

17

18

19

20

21

22

23

24

25

26

27

28