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BEFORE THE ARIZONA CORPORATION COMMISSION

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

Arizona Corporation Commission

DOCKETED

JUN 28 2007

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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. 69665

ORDER

Open Meeting
June 26 and 27 2007
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

- Southwest Gas Corporation (“Southwest”) is engaged in providing natural gas within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.
- 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.
- 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 Program¹

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

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 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 ¹ Budget allocations for 2008 and 2009 will be determined based on program needs.

26 ² Inspections and testing.

27 ³ Newspapers, magazines and brochures.

28 ⁴ Trade shows, displays and handouts.

⁵ Seminars and workshops.

⁶ RESNET rating fees and REM/Rate® software.

⁷ 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 ₂ (lbs)	NO _x (lbs)	So _x (lbs)	H ₂ 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
Lifetime Savings	691,932,969	129,785	3,245	175,812,848

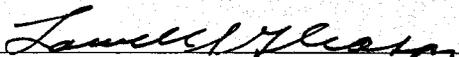
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15 27. Southwest reports its residential new construction program in its semi-annual
16 demand-side management reports filed with the Commission. Through 2006, the program was
17 reported on as Energy Advantage Plus, but with the new energy efficiency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

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

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

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

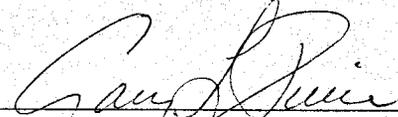
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5 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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8 CHAIRMAN

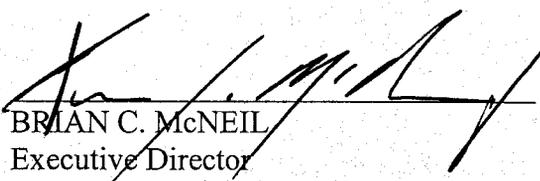

9 COMMISSIONER

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11 COMMISSIONER


12 COMMISSIONER


13 COMMISSIONER

14 IN WITNESS WHEREOF, I BRIAN C. McNEIL, Executive
15 Director of the Arizona Corporation Commission, have
16 hereunto, set my hand and caused the official seal of this
17 Commission to be affixed at the Capitol, in the City of
18 Phoenix, this 28th day of June, 2007.


19 BRIAN C. McNEIL
20 Executive Director

21 DISSENT: _____

22 DISSENT: _____

23 EGJ:JMK:tdp\JMA

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