

Paul Robbins
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December 22, 2017

Rondella Hawkins
City of Austin, Telecommunications and Regulatory Affairs
P.O. Box 1088
Austin, TX 78767-1088

Subject: Petition for appeal of 2018 Texas Gas Service Conservation Adjustment Clause to City of Austin under Subchapter D, Sec. 104.151, of the Gas Utility Regulatory Act of the State of Texas Utility Code

Dear Ms. Hawkins:

I am petitioning for appeal of the 2018 Texas Gas Service (TGS) Conservation Adjustment Clause (CAC) for its service territory regulated by the City of Austin. I am affected by this charge because I am a Residential Class ratepayer receiving TGS service in the Austin city limits.

The TGS CAC budget for 2018 has been administratively approved by your office, which represents the City of Austin. The City has original jurisdiction over TGS rates. I believe this rate went into effect on November 29, 2017.

My challenge concerns the cost effectiveness of the Residential conservation programs. In utility energy efficiency efforts that I am familiar with that are operated by Austin Energy (the electric utility that I am served by), most programs adhere to Benefit/Cost tests proving that the programs save energy at less than the cost of the conservation measure or retrofit and the program administrative expenses. Low-income programs and pilot programs are generally exempt from this benchmark, though even then, their costs must be justified.

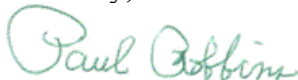
In the case of the 2018 TGS conservation budget, the company's own expert submitted documentation to the City of Austin showing that about 43% of its budget for Residential energy-efficiency programs has a Benefit/Cost result of below 1.0 (as measured by the Total Resource Cost test). This 43% does not include low-income programs.

This amounts to about \$1.2 million, or about \$5 per Residential customer that will be misspent for programs that are not cost effective in the next budget year.

As petitioner in the appeal, I will seek to prove that these programs should not be funded with ratepayer money, and will ask that they be disallowed in the 2018 CAC.

Thank you for your attention.

Sincerely,



Paul Robbins, (512) 447-8712

BASIS OF APPEAL

1. TGS is required to operate demand-side conservation programs as part of its franchise agreement with the City of Austin.
2. The program is funded by the CAC, a surcharge on the monthly bills of all participating ratepayers, which TGS updates on an annual basis. The 2018 CAC budget has been approved administratively by the City of Austin Office of Telecommunications and Regulatory Affairs.
3. In demand-side conservation programs, one of the primary goals is to save natural resources cost effectively.

The cost effectiveness of these programs is measured by various Benefit/Cost (B/C) tests. The most essential of these tests is called the Total Resource Cost test, which is a proxy for the cost of energy. If, for example, the B/C is 1.0, the program is saving gas at what it costs the utility to purchase. If the B/C is 0.5, it is saving gas at twice what it costs the utility to purchase. If the B/C is 2.0, it is saving gas at half of what it cost the utility to purchase.

4. TGS had its proposed programs evaluated by its consultant, Paul Raab. Using this expert's own evaluation, I have estimated that 43% of the TGS 2018 Residential conservation budget will be spent for programs with a Total Resource Cost B/C of below 1.0. These various programs have a B/C of between 0.26 and 0.62. See partial summary of the Raab evaluation in Attachment 1.

Further, the consultant's determination of cost effectiveness of the rebate program for high-efficiency central furnaces in new homes is questionable. The calculated savings appears to be the same for both old and new homes, even though older homes were constructed with older building codes and are likely to be less energy-efficient than new homes with modern building codes.

Low-income programs, which are conducted as a social service, and pilot programs, are often considered exempt from cost-effectiveness benchmarks in utility conservation programs and are not included in this (43%) estimate of wasted funds.

5. The Raab evaluation can be considered too lenient, first because it was conducted on behalf of the utility and not as a third party analysis, and second because it fails to factor in the administrative costs of individual program evaluations, including clerical costs, inspections, and marketing.

Administrative overhead is about 18%, so if this were factored into the Total Resource Cost B/C, it would likely lower the B/C of the programs in question to between 0.22 and 0.53 for the programs in Attachment 1.

Note that in Attachment 1, Administrative costs are higher than 18%. This is because in Raab's calculations, he includes education programs as part of Overhead. I excluded education programs to be conservative. If I were to include education expenses, Administrative costs would be almost twice as high.

6. The programs that are not cost effective amount to about \$1 million, and about \$1,200,000 with estimated administrative overhead. This amounts to about \$5 per participating customer in the 17 cities it has been approved for. See Attachments 2 and 3.

Attachment 2 is the proposed 2018 TGS conservation budget, and Attachment 3 calculates the amount of money for Residential programs that is listed in Attachment 2 that is not cost effective.

Similar programs that are not cost effective continue to be approved year after year.

7. While I am currently not questioning the merits of the balance of the 2018 CAC budget, I may use this appeal to review expenditures in any of its programs to assure that the money is being spent prudently.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on all parties listed below on December 22, 2017 by email. Copy also mailed to Stephanie Houle, Texas Gas Service, by United States first-class mail of the same day.



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ATTACHMENT 1: TEXAS GAS SERVICE SUMMARY OF TOTAL RESOURCE COST TEST EVALUATIONS

| Program | COST | NET BENEFIT | BENEFIT/COST |
|--|---------------------------|---------------------------|--------------|
| Commercial Tankless Water Heater | \$15,000 | \$95,050 | 7.34 |
| Dryer Program | \$9,164 | \$11,785 | 2.29 |
| Commercial Food Service Program - Fryers | \$5,500 | \$29,321 | 6.33 |
| Commercial Food Service Program - Ovens | \$7,000 | \$8,876 | 2.27 |
| Natural Gas Vehicle Commercial Rebate | \$16,000 | (\$14,090) | 0.12 |
| Weather Stripping Direct Install | \$48,000 | \$86,994 | 2.81 |
| HH Showerhead Direct Install | \$1,680 | \$2,550 | 2.52 |
| Fixed Showerhead Direct Install | \$39,000 | \$109,144 | 3.8 |
| Faucet Aerator Direct Install | \$65,000 | \$341,888 | 6.26 |
| Pre-Rinse Spray Valve Direct Install | \$1,400 | \$5,281 | 4.77 |
| Dryer Smart Direct Install | \$10,000 | \$90,170 | 10.02 |
| Steam Trap Replacement Direct Install | \$4,000 | \$25,313 | 7.33 |
| Subtotal Small Commercial | <u>\$221,744</u> | <u>\$792,282</u> | <u>4.57</u> |
| Tankless Water Heater Residential Rebate | \$337,500 | (\$171,713) | 0.49 |
| Furnace Tune-up Residential Rebate | \$59,378 | (\$43,960) | 0.26 |
| High Efficiency Furnace Residential Rebate (>92%) | \$52,130 | (\$34,732) | 0.33 |
| Natural Gas Dryer Program | \$916,410 | \$400,071 | 1.44 |
| Duct Efficiency Improvement Residential Rebate | \$367,215 | \$436,768 | 2.19 |
| Mail Out Kits | \$10,800 | \$59,041 | 6.47 |
| Residential Wireless Thermostat | \$2,917 | (\$1,111) | 0.62 |
| Attic Insulation Residential Rebate | \$114,285 | \$1,491,226 | 14.05 |
| New Construction Tankless Water Heater Residential Rebate | \$862,500 | (\$438,823) | 0.49 |
| New Construction High Efficiency Furnace Residential Rebate (>92%) | \$240,600 | (\$160,303) | 0.33 |
| New Construction Natural Gas Dryer Program | \$394,056 | \$172,031 | 1.44 |
| Low Income Program - Water Heater | \$8,750 | (\$6,535) | 0.25 |
| Low Income Program - Stove | \$32,322 | \$21,448 | 1.66 |
| Low Income Program - Furnace | \$32,080 | (\$26,800) | 0.16 |
| Low Income Program - Dryer | \$4,582 | \$2,000 | 1.44 |
| Subtotal Residential | <u>\$3,435,525</u> | <u>\$1,698,607</u> | <u>1.49</u> |
| Overhead Expenses | \$870,000 | (\$870,000) | - |
| TOTAL PORTFOLIO | <u><u>\$4,527,269</u></u> | <u><u>\$1,620,889</u></u> | <u>1.36</u> |

NOTE: This analysis compares total costs of both the utility and the participant to gas savings. Administrative (overhead) costs appear to be ignored in the analysis of the individual programs.

ATTACHMENT 2

Texas Gas Service
2018 Central Texas Energy Efficiency Program Budget

| Program | Rebate Amount | 2018 Proposed | | 2018 Budget vs 2017 Budget | 2017 Actual (9+3) | | 2017 Budget vs. Actual (9+3) | | 2016 Actual | | 2017 Actual (9+3) vs 2016 Actual | |
|---|--|---------------|---------------------|----------------------------|-------------------|---------------------|------------------------------|---------------------|---------------|---------------------|----------------------------------|----------------------|
| | | Rebate Count | Budget | Variance | Rebate Count | Expenditure | Budget | Variance | Rebate Count | Expenditure | Rebate Variance | Expenditure Variance |
| Commercial | | | | | | | | | | | | |
| <u>Water Heating Programs</u> | | | | | | | | | | | | |
| Water Heating System | 14% (.82-.86 EF) or 20% (>.87 EF) of water heater system >75,000 BTUs | - | \$ - | \$ - | - | \$ - | - | - | 6 | \$ 20,333 | (6) | \$ (20,333) |
| Tankless or Super High-Efficiency Natural Gas Water Heater | \$600 | 20 | 12,000 | - | 4 | 2,400 | - | - | 24 | 14,400 | (20) | (12,000) |
| Solar Water Heater with Natural Gas Backup | 20% of installed cost | - | - | - | - | - | - | - | - | - | - | - |
| Total Water Heating Programs | | 20 | \$ 12,000 | \$ (18,383) | 4 | \$ 2,400 | \$ 30,383 | \$ (27,983) | 30 | \$ 34,733 | (26) | \$ (32,333) |
| Natural Gas Dryer with Moisture Sensor Program | \$225 | 10 | \$ 2,250 | \$ (1,350) | 4 | \$ 900 | \$ 3,600 | \$ (2,700) | 15 | \$ 3,375 | (11) | \$ (2,475) |
| Food Service Equipment Programs: EnergyStar griddles, fryers, convection ovens and steam cookers | \$400 | 10 | \$ 4,000 | \$ 3,857 | 2 | \$ 3,500 | \$ 143 | \$ 3,357 | 2 | \$ 763 | - | \$ 2,737 |
| <u>Natural Gas Vehicle Programs</u> | | | | | | | | | | | | |
| Converted Natural Gas Vehicle | \$3,000 | 4 | 12,000 | - | 1 | 3,000 | - | - | 1 | 3,000 | - | - |
| Natural Gas Vehicle Refueling Station | \$2,000 | - | - | - | - | - | - | - | - | - | - | - |
| Total Natural Gas Vehicle Programs | | 4 | \$ 12,000 | \$ 9,000 | 1 | \$ 3,000 | \$ 3,000 | \$ - | 1 | \$ 3,000 | - | \$ - |
| <u>Direct Install Programs (Measures)</u> | | | | | | | | | | | | |
| Weather Stripping | \$8/ft. | 6,000 | 48,000 | - | 5,500 | 44,000 | - | - | 2,423 | 19,384 | 3,077 | 24,616 |
| Low-Flow Handheld Showerhead | \$21 | 80 | 1,680 | - | 80 | 1,680 | - | - | 71 | 1,491 | 9 | 189 |
| Low-Flow Fixed Showerhead | \$13 | 3,000 | 39,000 | - | 2,500 | 32,500 | - | - | 1,447 | 18,811 | 1,053 | 13,689 |
| Low-Flow Faucet Aerator | \$13 | 5,000 | 65,000 | - | 4,500 | 58,500 | - | - | 2,824 | 36,712 | 1,676 | 21,788 |
| Pre-Rinse Spray Valve | \$140 | 10 | 1,400 | - | 10 | 1,400 | - | - | 12 | 1,680 | (2) | (280) |
| Dryer Smart | \$1,000 | 10 | 10,000 | - | - | - | - | - | - | - | - | - |
| Steam Trap Replacement | \$400 | 10 | 4,000 | - | - | - | - | - | - | - | - | - |
| Total Direct Install Programs | | 14,110 | \$ 169,080 | \$ 60,053 | 12,990 | \$ 138,080 | \$ 109,027 | \$ 29,053 | 6,777 | \$ 78,078 | 5,813 | \$ 60,002 |
| Total Commercial | | 14,154 | \$ 199,330 | \$ 53,177 | 12,601 | \$ 147,880 | \$ 146,153 | \$ 1,727 | 6,825 | \$ 119,949 | 5,776 | \$ 27,931 |
| Residential | | | | | | | | | | | | |
| <u>Residential Retrofit</u> | | | | | | | | | | | | |
| <u>Water Heating Programs</u> | | | | | | | | | | | | |
| High-Efficiency Natural Gas Water Heater: .67 EF-.81 EF | Sunset | - | \$ - | - | 8 | \$ 800 | - | - | 11 | \$ 1,100 | (3) | \$ (300) |
| Tankless or Super High-Efficiency Natural Gas Water Heater: .82 EF or above | \$650 | 450 | 292,500 | - | 375 | 281,250 | - | - | 335 | 251,250 | 40 | 30,000 |
| Solar Water Heater with Natural Gas Backup | \$750 | - | - | - | - | - | - | - | - | - | - | - |
| Total Water Heating Programs | | 450 | \$ 292,500 | \$ 115,923 | 383 | \$ 282,050 | \$ 176,577 | \$ 105,473 | 346 | \$ 252,350 | 37 | \$ 29,700 |
| <u>Heating Programs</u> | | | | | | | | | | | | |
| Annual Natural Gas Furnace Tune-Up | \$40 | 650 | 26,000 | - | 525 | 21,000 | - | - | 372 | 14,880 | 153 | 6,120 |
| Natural Gas Furnace: 80% AFUE or higher | Sunset in 2017 | - | - | - | 1 | 75 | - | - | 284 | 21,300 | (283) | (21,225) |
| Natural Gas Furnace: 92% AFUE or higher | \$675 | 65 | 43,875 | - | 45 | 30,375 | - | - | 64 | 43,200 | (19) | (12,825) |
| Total Heating Programs | | 715 | \$ 69,875 | \$ (69,707) | 571 | \$ 51,450 | \$ 139,582 | \$ (88,132) | 1,015 | \$ 101,505 | (444) | \$ (50,055) |
| <u>Natural Gas Dryer Programs</u> | | | | | | | | | | | | |
| Bonus Dryer Voucher | \$100 | 50 | 5,000 | - | 50 | 5,000 | - | - | 149 | 14,900 | (99) | (9,900) |
| Natural Gas Dryer with Moisture Sensor | \$225 | 1,000 | 225,000 | - | 1,000 | 225,000 | - | - | 1,052 | 236,700 | (52) | (11,700) |
| Natural Gas Dryer Stub | \$300 | 50 | 15,000 | - | 50 | 15,000 | - | - | 50 | 15,000 | - | - |
| Total Natural Gas Dryer Programs | | 1,100 | \$ 245,000 | \$ (53,681) | 1,100 | \$ 245,000 | \$ 298,681 | \$ (53,681) | 1,251 | \$ 266,600 | (151) | \$ (21,600) |
| Total Natural Gas Vehicle Programs (Sunset) | Sunset | - | \$ - | \$ (11,000) | 4 | \$ 8,000 | \$ 11,000 | \$ (3,000) | 4 | \$ 8,000 | - | \$ - |
| <u>Home Improvement Programs (Participants)</u> | | | | | | | | | | | | |
| Duct Sealing, Replacement & Insulation | \$.08/ft. ² ; \$1.50/ft. ² \$1.00/ft. ² | 1,959 | 367,215 | - | 1,358 | 289,399 | - | - | 1,118 | 196,900 | 240 | 92,499 |
| Attic Insulation | \$.0025 ft. ² x "R" value + \$45 setup fee | 770 | 114,285 | - | 660 | 128,751 | - | - | 534 | 97,517 | 126 | 31,234 |
| Wi-Fi Thermostat | \$25 | 15 | 375 | - | 13 | 325 | - | - | 3 | 75 | 10 | 250 |
| Mail Out Kits: 2 showerheads, 3 faucet aerators | \$18 | 600 | 10,800 | - | - | - | - | - | - | - | - | - |
| Total Home Improvement Programs | | 3,344 | \$ 492,675 | \$ 194,200 | 2,031 | \$ 418,475 | \$ 298,475 | \$ 120,000 | 1,655 | \$ 294,492 | 376 | \$ 123,983 |
| Total Residential Retrofit | | 5,609 | \$ 1,100,050 | \$ 175,735 | 4,089 | \$ 1,004,975 | \$ 924,315 | \$ 80,660 | 4,271 | \$ 922,947 | (182) | \$ 82,028 |
| <u>Residential New Construction</u> | | | | | | | | | | | | |
| <u>Water Heating Programs</u> | | | | | | | | | | | | |
| Tankless or Super High-Efficiency Natural Gas Water Heater: .82 EF or above | \$400 | 1,150 | 460,000 | - | 882 | 529,200 | - | - | 1,118 | 670,800 | (236) | (141,600) |
| Solar Water Heater with Natural Gas Backup | \$750 | - | - | - | - | - | - | - | - | - | - | - |
| Total Water Heating Programs | | 1,150 | \$ 460,000 | \$ (382,023) | 882 | \$ 529,200 | \$ 842,023 | \$ (312,823) | 1,118 | \$ 670,800 | (236) | \$ (141,600) |
| <u>Heating Programs</u> | | | | | | | | | | | | |
| Hydronic Heating (Sunset) | Sunset | - | - | - | 335 | 41,875 | - | - | 100 | 12,500 | 235 | 29,375 |
| Natural Gas Furnace: 92% AFUE or higher | \$675 | 300 | 202,500 | - | 218 | 147,150 | - | - | 37 | 24,975 | 181 | 122,175 |
| Total Heating Programs | | 300 | \$ 202,500 | \$ 154,832 | 553 | \$ 189,025 | \$ 47,668 | \$ 141,357 | 137 | \$ 37,475 | 416 | \$ 151,550 |
| <u>Natural Gas Dryer Programs</u> | | | | | | | | | | | | |
| Natural Gas Dryer with Moisture Sensor | \$225 | 430 | 96,750 | - | 371 | 83,475 | - | - | 222 | 49,950 | 149 | 33,525 |
| Natural Gas Dryer Stub | \$300 | 830 | 249,000 | - | 746 | 223,800 | - | - | 472 | 141,600 | 274 | 82,200 |
| Total Natural Gas Dryer Programs | | 1,260 | \$ 345,750 | \$ 105,306 | 1,117 | \$ 307,275 | \$ 240,444 | \$ 66,831 | 694 | \$ 191,550 | 423 | \$ 115,725 |
| <u>Whole Home Programs</u> | | | | | | | | | | | | |
| Whole-Home Program: 3-star AE Green Build/EnergyStar V3 | Sunset | - | - | - | 16 | 5,200 | - | - | 8 | 2,600 | 8 | 2,600 |
| Whole-Home Program: 5-star AE Green Build | Sunset | - | - | - | 10 | 5,000 | - | - | - | - | 10 | 5,000 |
| Total Whole Home Programs | | - | \$ - | \$ (975) | 26 | \$ 10,200 | \$ 975 | \$ 9,225 | 8 | \$ 2,600 | 18 | \$ 7,600 |
| Total Residential New Construction | | 2,710 | \$ 1,008,250 | \$ (122,860) | 2,578 | \$ 1,035,700 | \$ 1,131,110 | \$ (95,410) | 1,957 | \$ 902,425 | 621 | \$ 133,275 |
| Low-Income Free Equipment | - | - | \$ 300,000 | - | - | \$ 280,000 | - | \$ 20,000 | - | \$ 688,159 | - | \$ (408,159) |
| Total Residential | | 8,319 | \$ 2,408,300 | \$ 102,875 | 6,667 | \$ 2,320,675 | \$ 2,305,425 | \$ 15,250 | 6,228 | \$ 2,513,531 | 439 | \$ (192,856) |
| Education Expenses | | - | \$ 400,000 | \$ - | - | \$ 390,000 | \$ 400,000 | \$ (10,000) | - | \$ 365,461 | - | \$ 24,539 |
| Administrative Expenses | | | | | | | | | | | | |
| Operation Expenses | | - | \$ 445,000 | \$ 20,000 | - | \$ 415,000 | \$ 425,000 | \$ (10,000) | - | \$ 370,906 | - | \$ 44,094 |
| Pecan Street Sponsorship | | - | 25,000 | - | - | 25,000 | 25,000 | - | - | 25,000 | - | - |
| Total Administrative Expenses | | - | \$ 470,000 | \$ 20,000 | - | \$ 440,000 | \$ 450,000 | \$ (10,000) | - | \$ 395,906 | - | \$ 44,094 |
| Grand Total | | 22,473 | \$ 3,477,630 | \$ 176,052 | 19,268 | \$ 3,298,555 | \$ 3,301,578 | \$ (3,023) | 13,053 | \$ 3,394,847 | 6,215 | \$ (96,292) |

**ATTACHMENT 3: TGS Residential Conservation Programs Not
Cost Effective in 2018 Proposed Budget**

| | |
|--|--------------|
| High-Efficiency Water Heater – Retrofit | \$292,500 |
| High-Efficiency Furnace – Retrofit | \$43,875 |
| High-Efficiency Water Heater – New Homes | \$460,000 |
| High-Efficiency Furnace – New Homes | \$202,500 |
| Natural Gas Furnace Tune-up | \$26,000 |
| <u>Wireless Thermostat</u> | <u>\$375</u> |
| Total | \$1,025,250 |
| Total with Administration | \$1,209,795 |
| | |
| Cost Per Customer | \$5.14 |

Note: Estimate of 235,436 Residential Customers in 2016

*Note: Above expenditures do not include customer money
contributed to these measures that was not part of the TGS incentive*