

program administrators, were the primary determinant for several states. Nevada, for example, adjusts its test fees based on annual surveys of labor costs for inspection stations in the state's program areas. State environmental agencies also cited labor costs as the main reason for a recent fee increase in Oregon and for a proposed fee increase in Maine. In addition to labor costs, Nevada also considers the volume of vehicles that get tested in each of its program areas when determining its test fees each year. In states where a portion of the fee is kept by the state—such as in Arizona, North Carolina, and Rhode Island—revenue from the emissions test fee is sometimes used to fund other environmental programs or the state's highway fund. Compliance costs, such as for auditing inspection stations, were another factor some state environmental agencies took into consideration.

Similar to Texas, a few other states have separate fees for different program areas within the same state. In Oregon, for example, the fee for Portland is higher than in Medford, a legacy of when Portland administered a more expensive test than Medford. Oregon has recently moved to close the gap in fees since both program areas now use less expensive testing. Similarly, Arizona charges a higher fee for testing in Phoenix than in Tucson, in part because the test in the Phoenix program area involved more items to inspect. New York charges a higher fee for emissions testing in the New York Metropolitan Area compared to the rest of the state. ERG could not find a source to explain this differentiation, but some potential explanations include differences in cost of living and vehicle density.

D. ADEQUACY OF THE FEE: WHAT THE COST MODEL INDICATES

As Chapter VI discusses in more detail, ERG developed both break-even and model station cost models for the HGB/DFW, El Paso, and ARR program areas.

In the break-even cost model, summarized in Table VIII-4, 83% of stations in HGB/DFW are shown to have sufficient throughput to generate emissions inspection revenues that meet or exceed variable and fixed costs (excluding building costs). In El Paso, 56% of stations (excluding building costs) have sufficient throughput to generate emissions inspection revenues that meet or exceed variable and fixed costs. Only 2% of ARR stations achieve the break-even number of emissions tests when excluding building costs. As discussed in previous sections, some stations did not incur additional building costs to be able to offer testing, so the analyses are done with and without building costs included.

Table VIII-4. Stations At/Above Break-Even Number of Inspections

	HGB/DFW	El Paso	ARR
Monthly break-even number of tests including equipment costs	45	120	1,113
Monthly break-even number of tests including equipment and single bay costs	79	194	2,122
Monthly break-even number of tests including equipment and building costs	116	273	3,215
Percent of stations above break-even number including equipment costs	83%	56%	2%
Percent of stations above break-even number including equipment and single bay costs	68%	40%	0%
Percent of stations above break-even number including equipment and building costs	53%	30%	0%

The summary of the percent of stations breaking even since 2012, shown below in Table VIII-5, compares 2024 percentages to past years' percentages. All program areas saw an increase in the number of tests needed to break even. In the HGB/DFW program areas, the break-even number of tests increased from 2022 to 2024 (34 to 45). The increase in break-even tests for stations in the HGB/DFW programs areas is driven largely by the increase in the median hourly wage of emissions inspectors (\$16.75 in 2024 compared to \$15.00 in 2022). The El Paso program area also saw an increase in the number of tests required to break even (71 to 120) and a drop in the percent of stations breaking even (73% to 56%). The increase in break-even tests in El Paso is largely because labor costs increased 21%, from \$12.00 to \$14.50. The ARR program area experienced a substantial increase in the number of break-even tests (78 to 1,113), with the percent of stations breaking even dropping from 71% to just 2%. This change is also due to increased emissions inspector wages; the median wage recorded within the ARR program area increased by 18% compared to 2022, from \$17.00 to \$20.00. In addition, the total estimated time spent per test used in the cost models (calculated as the time to perform the emissions inspection plus the extra time spent with the customer) was standardized across program areas in 2024 to 25 minutes. This resulted in an increase of 7.5 minutes for the ARR program area (17.5 minutes in 2022 to 25 minutes in 2024). The HGB/DFW and El Paso program areas had estimated increases of 1.5 and 4 minutes, respectively. With an increase in test time and labor costs, ARR stations are estimated to spend \$11.12 per test while still taking in \$11.50 in revenue, producing a per-test profit margin of just \$0.38. For comparison, in 2022, stations in ARR were modeled to spend \$6.80 per test. The per-test profit margin in the HGB/DFW program areas decreased from \$11.09 in 2022 to \$9.66 in 2024, and in El Paso this margin decreased from \$6.18 to \$4.18.

Table VIII-5. Summary of Break-Even Number of Inspections from 2012 to 2024 in All Program Areas, Excluding Building Costs

	HGB/DFW	El Paso	ARR
Break-even tests (2012)	27	70	80
Break-even tests (2014)	26	73	76
Break-even tests (2016)	26	70	79
Break-even tests (2018)	26	70	82
Break-even tests (2020)	28	80	99
Break-even tests (2022)	34	71	78
Break-even tests (2024)	45	120	1,113
Percent of stations breaking even (2012)	86%	80%	74%
Percent of stations breaking even (2014)	87%	81%	73%
Percent of stations breaking even (2016)	87%	80%	74%
Percent of stations breaking even (2018)	89%	84%	77%
Percent of stations breaking even (2020)	89%	78%	69%
Percent of stations breaking even (2022)	86%	73%	71%
Percent of stations breaking even (2024)	83%	56%	2%

The model station analysis reveals similar findings. This analysis created area-specific small-, medium-, and large-throughput stations representative of stations in the 25th, 50th (median), and 75th percentiles, respectively, based on emissions inspection throughput. Table VIII-6 shows whether small-, medium-, and large-throughput model stations in HGB/DFW, El Paso, and ARR generate enough revenue from emissions inspections to recoup costs under different scenarios. Multiple station types have revenues that do not exceed total costs when accounting

for both equipment and building costs. These cases occur in small model stations in all program areas, medium-sized stations in the El Paso and ARR program areas, and large stations in the ARR program area. These same model station types also do not have revenues sufficient to cover the costs of their equipment and the rent for a single bay. Only three model station types across the active program areas have revenues that exceed costs when accounting for both equipment and building costs and when accounting for equipment and rent for a single bay. None of the station types in ARR and only the small model station in El Paso have sufficient revenue to cover costs in the equipment-only costs scenario.

Table VIII-6. Total Monthly Costs and Net Revenues at Model Stations

	HGB/DFW	El Paso	ARR
Equipment-only costs			
Small station gross revenue	\$1,129	\$690	\$782
Small station total costs	\$970	\$942	\$1,183
Small station net revenue	\$158	(\$252)	(\$401)
Medium station gross revenue	\$2,294	\$1,610	\$1,702
Medium station total costs	\$1,527	\$1,527	\$2,072
Medium station net revenue	\$767	\$83	(\$370)
Large station gross revenue	\$4,533	\$3,646	\$3,795
Large station total costs	\$2,596	\$2,823	\$4,095
Large station net revenue	\$1,937	\$822	(\$300)
Equipment + single bay costs			
Small station gross revenue	\$1,129	\$690	\$782
Small station total costs	\$1,302	\$1,249	\$1,570
Small station net revenue	(\$173)	(\$559)	(\$788)
Medium station gross revenue	\$2,294	\$1,610	\$1,702
Medium station total costs	\$1,859	\$1,835	\$2,460
Medium station net revenue	\$435	(\$225)	(\$758)
Large station gross revenue	\$4,533	\$3,646	\$3,795
Large station total costs	\$2,928	\$3,130	\$4,483
Large station net revenue	\$1,605	\$515	(\$688)
Equipment + building costs			
Small station gross revenue	\$1,129	\$690	\$782
Small station total costs	\$1,661	\$1,582	\$1,990
Small station net revenue	(\$533)	(\$892)	(\$1,208)
Medium station gross revenue	\$2,294	\$1,610	\$1,702
Medium station total costs	\$2,218	\$2,167	\$2,879
Medium station net revenue	\$76	(\$557)	(\$1,177)
Large station gross revenue	\$4,533	\$3,646	\$3,795
Large station total costs	\$3,287	\$3,463	\$4,902
Large station net revenue	\$1,245	\$182	(\$1,107)

Note: Net revenue may not equal gross revenue minus total costs due to rounding.

VI. COST MODEL ANALYSES

This chapter presents the results of the “model station” and “break-even” cost analyses performed for the HGB, DFW, El Paso, and ARR program areas (with HGB and DFW combined in the analyses). This chapter also models hypothetical costs for inspection stations in Bexar County.

The chapter first summarizes the results of the break-even and model station analyses, then presents the applicable costs and revenues that feed into the cost models, and then provides these cost models in more detail in program-area-specific sections.

The break-even analyses show the number of inspections at which the net revenue from emissions inspections (calculated as the average number of emissions inspections performed multiplied by the average net emissions inspection fee) equals the sum of the total incremental costs (fixed and variable) attributed to emissions inspections. These analyses provide the break-even number of emissions inspections under a variety of conditions: for stations that incur equipment costs only, for stations that incur equipment and single bay costs, and for stations that incur both equipment and building costs. The goal of the different modeling approaches is to assess how many tests a station would need to perform to cover additional types of costs that may be more relevant to specific types of stations. As an example, since a significant portion of test-only stations’ revenue comes from emissions tests, the model that includes equipment and building costs may be more reflective of that business model than a T&R station business model.

Table VI-1 summarizes the results of the break-even analyses. Including building costs, the percent of stations that break even according to the model is 53% in the HGB/DFW program areas and 30% in El Paso. No stations in the ARR program area achieve the break-even threshold of tests when accounting for building costs. With building costs excluded, 83% of stations break even in the HGB/DFW program areas according to the model; the El Paso program area is much lower, at 56%, while only 2% of stations in ARR meet this break-even threshold.

The model station analyses include representative small, medium, and large stations based on actual emissions inspection throughput from January 1 to December 31, 2023, for the 4,675 stations in the TIMS database. The small station represents a station with emissions inspection throughput in the 25th percentile (1st quartile), the medium station represents a station with emissions inspection throughput in the 50th percentile (median), and the large station represents a station with emissions inspection throughput in the 75th percentile (3rd quartile). The throughput data from all the stations in the program area—not just those that answered the survey—is used to determine the throughput for each representative station in the 25th, 50th, and 75th percentile.

Table VI-2 shows the monthly costs and net revenues at model stations of different sizes and under different scenarios. Multiple station types have revenues that do not exceed total costs when accounting for both equipment and building costs. These cases occur in small model stations in all program areas, medium-sized stations in the El Paso and ARR program areas, and large stations in the ARR program area. These same model station types also do not have revenues sufficient to cover the costs of their equipment and the rent for a single bay. Only three model station types across the active program areas have revenues that exceed costs

when accounting for both equipment and building costs and when accounting for equipment and rent for a single bay. None of the station types in ARR and only the small model station in El Paso have sufficient revenue to cover costs in the equipment-only costs scenario. These models do not make a distinction between test-only and T&R stations (as the incremental emissions inspection costs are the same)—these station types are aggregated in the analyses. This section does, however, provide supplementary quantitative and qualitative analysis discussing how the generally higher throughput at test-only stations affects the cost models. This section also provides a qualitative analysis of how the additional income from emissions-inspection-generated repairs affects the model.

For context, Table VI-3 shows that between 11.8% and 26.3% of stations in each program area reported adding or acquiring building space in order to perform vehicle emissions inspections.

Table VI-1. Stations At/Above Break-Even Number of Inspections

	HGB/DFW	El Paso	ARR
Monthly break-even number of tests including equipment costs	45	120	1,113
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