Tankless Water Heater Cost Survey Summary
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One major component of cost effectiveness is additional cost of efficient appliances compared to conventional units.

I have repeatedly complained that TGS' past evaluations do not use real costs. Instead they rely on "deemed" costs from various studies or sources that: 1) do not reflect local situations; and 2) do not rely on direct documentation or surveys of contractors.

In late 2021, I requested receipts of tankless water heaters that applied for TGS-Austin rebates. The request was made to the Office of Telecommunications and Regulatory Affairs, since it has the authority to require that the gas company produce them.

I have attached the results of this survey. TGS does not track the information that I collected in automated form. Instead, I was given scanned receipts (via e-mail) with names of applicants removed to protect privacy.

I hand-transcribed 224 applications to learn as much in-context information as I could.

Reviewers can be forgiven if they find the notes boring. However, consider how lucky you are. It took about 3 days for me to enter this data, and I have saved anyone wanting to use it a great deal of time.

Reasons for Sample Size: I wanted to base conclusions on as large a sample as possible.

I originally asked for a year of receipts, but TGS limited the number to 2 months. Also, about 20% of the files that I was sent were incomplete. I asked for corrected files and received no response.

CONCLUSIONS

The cost of tankless water heaters depends on how the data is viewed. I am going to summarize the data 4 different ways.

1. All Units With Complete Information
Average Cost: $3,659
Number: 181 Units

2. Units With Complete Information That Replaced Conventional Water Heaters

Average Cost: $4,148
Number: 90 Units

3. Units With Complete Information That Replaced Tankless Water Heaters Already Installed

Average Cost: $3,175
Number: 91 Units

4. Units Probably Not Replaced Because of Winter Storm Uri

This analysis deleted units in data that were replaced between February 17 and March 31, 2021 and units that
were tankless to tankless replacements. Permit costs were waived during part of this time period. And some of the units were
probably tankless to tankless replacements, but this was not stated in the receipt.
Average Cost: $5,065
Number: 53 Units

Also, over half of the units in this sample replaced tankless units that were already installed. In these cases, any meager savings from replacing a tank water heater with a tankless water heater was largely or completely eliminated.

Comparison to Conventional Units: In 2021, a typical conventional gas water heater installation would cost about $1,550 to $1,850. No matter how you look at it, the data here shows that tankless units cost considerably more. At an average savings of about $21 a year, almost no Residential tankless installation will pay for itself over its expected 19 to 20 year lifetime.

Data Limitations: I am quite sure that there were more units that were replaced because of the 2021 winter freeze than what is included in this dataset. However, in the first 3 analyses, I conservatively used the language in receipts to identify this variable.

A few of the receipts discussed repairs to plumbing other than water heaters, such as fixing toilets. However, tankless water heater installations frequently have other work required that will not always be found in plumbing receipts,

such as sheetrock replacement, roof flashing, and electrical wiring. The few receipts with extraneous repairs are noted if reviewers want to adjust for them.

Final Comment: Gas utilities conducting conservation programs need to replicate this kind of survey to accurately reflect cost effectiveness.