

ILLUME



AN EARLY RETIREMENT SPIDERWEB: The Threads that Connect Markets to Evaluation

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PROGRAM DESIGN

- Early Retirement HVAC program — incentives for old but working furnaces, boilers, A/Cs, and heat pumps.
- Customers brought in through Home Energy Assessments and trade allies/contractors
- Increased incentives compared to Standard (Replace on Failure) HVAC rebate program
- Dual baseline/deemed savings values



EVALUATION

- Intent was to calculate a net (and gross) savings adjustment
 - Two measurements: NTG and Replace-on-failure estimation
- Navigated through numerous gray areas and considerations, including:
 - Defining the measurements themselves
 - Self-report complications
 - Other actors/forces influencing our results

NET TO GROSS APPROACH

As usual, a focus on timing, efficiency, and quantity—
but with a little more emphasis on timing



Timing



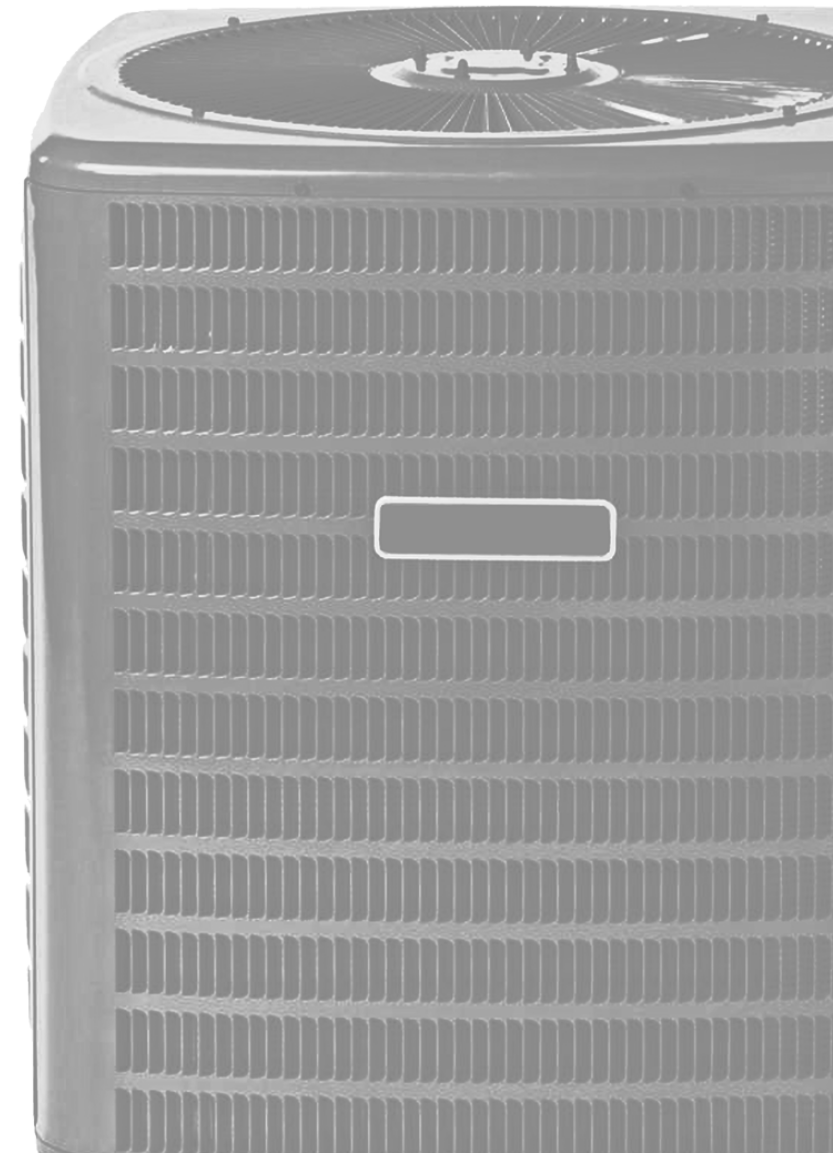
Efficiency



Quantity

REPLACE ON FAILURE VS EARLY RETIREMENT APPROACH

1. Which describes **the condition** of your old equipment?
(Working well, needed minor repairs, needed some repairs, needed major repairs, was not working at all)
2. Prior to replacing your old system, had it **undergone any repairs**?
 - [IF YES] Approximately **how many times** did you have to repair the old system the year prior to replacement?
3. How many years do you think your old system **would have lasted**?



GRAY AREAS

- Net-to-gross is always a little... gray
- Adding a replace on failure adjustment makes it even more complex

WHAT DOES
“EARLY RETIREMENT”
EVEN MEAN?

Replace Totally
on Failure Dead



IS THIS NET? OR GROSS?



What if someone said —

“I would have waited to replace my furnace until it failed, but it would have failed in the next year.”

Would you make adjustments so:

A) Net-to-gross = **low** , Gross savings = **high**

B) Net-to-gross = **high** , Gross savings = **low**

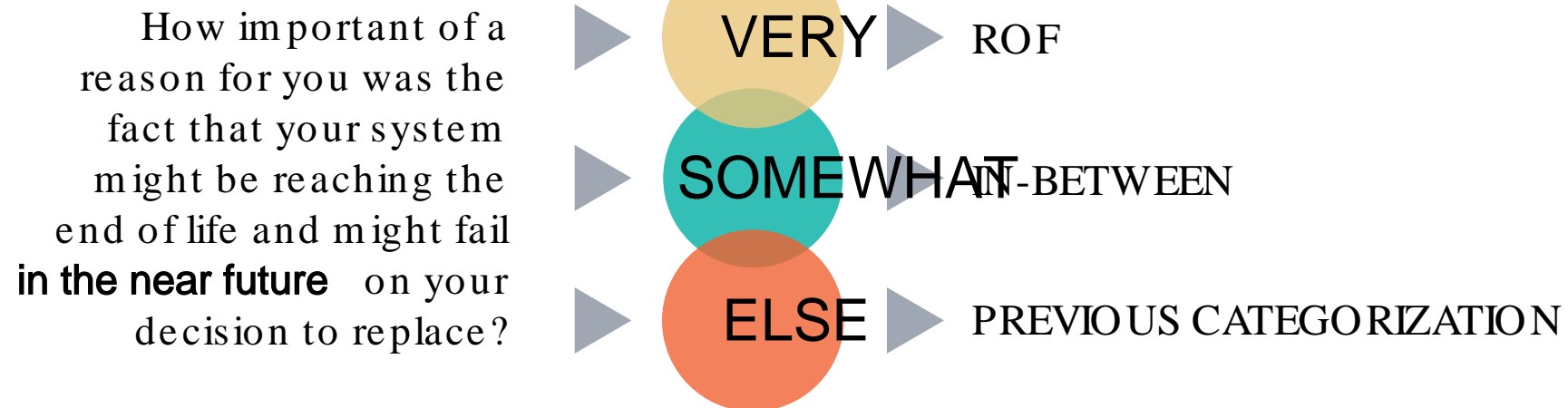
C) Reduce savings on both the net and gross side

CONTRACTOR MESSAGES

MESSING WITH OUR EVALUATION

Contractors leveraged customer anxiety about old equipment failing to effectively sell the Early Retirement program

However, we suspect this skewed respondents' self reports about the state of their equipment. We adjusted the approach to address this.



ACCOUNTING FOR STANDARD PROGRAM PARTICIPATION

Reviewed both Early Retirement and Standard program tracking data and conducted preliminary interviews

Uncovered that ~20% participated in both programs – e.g., replaced a failed A/C and early-retired a furnace

Included in NTG questioning

RESULTS/FINDINGS



ELECTRIC
NTG

88%

GAS/DELIVERED
NTG

85%

ER/ROF
ADJUSTMENT

63% /37%

TAKE AWAYS



Consider
intersectional
factors.

Keep it
flexible.

QUESTIONS?