



Market Transformation Analysis of Efficient New Homes Program

March 16, 2005



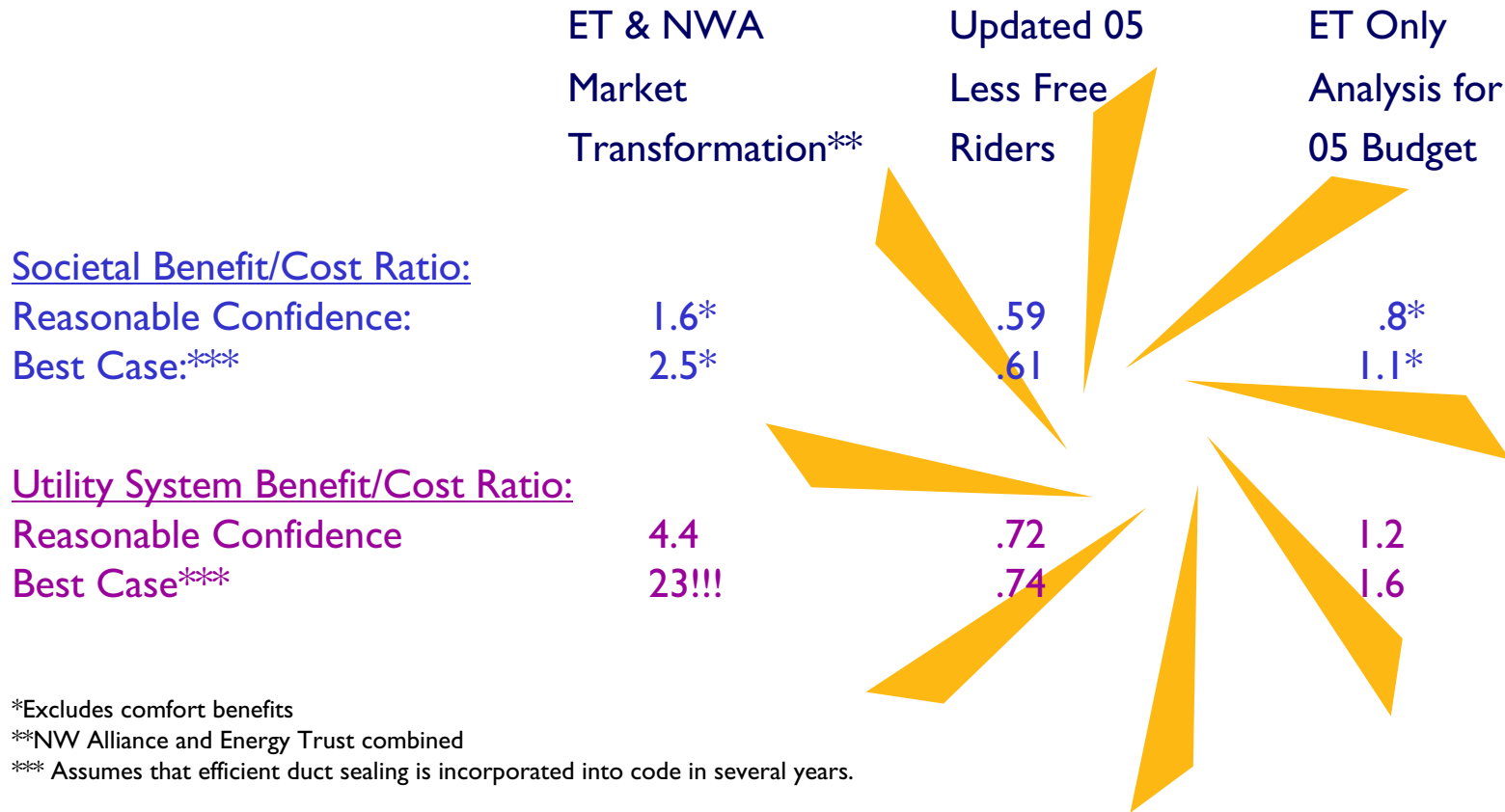
Bottom Line

- A new look at the Benefit/Cost for
 - the Efficient Homes program plus
 - the portion of the NW Alliance's ENERGY STAR[®] Homes program that is in Energy Trust service territoryas a combined market transformation program found reasonably good benefit for the investment.

Why A Combined Market Transformation Benefit-Cost Analysis

- We are running an integrated program for efficient new homes through two “programs” and two contracts:
 - Energy Trust Board-Approved Resource Acquisition Program
 - NW Alliance Regional Market Transformation Program
- In the past we analyzed the Energy Trust program. NW Alliance separately analyzed their program for the region as a whole. That poorly represents the reasons for investing in the Energy Trust program.
 - ET program is marginally cost-effective as a short-term resource acquisition effort.
 - Much larger market transformation impacts by running both programs.

Benefit/Cost Ratios Are More Attractive as a Market Transformation Program



*Excludes comfort benefits

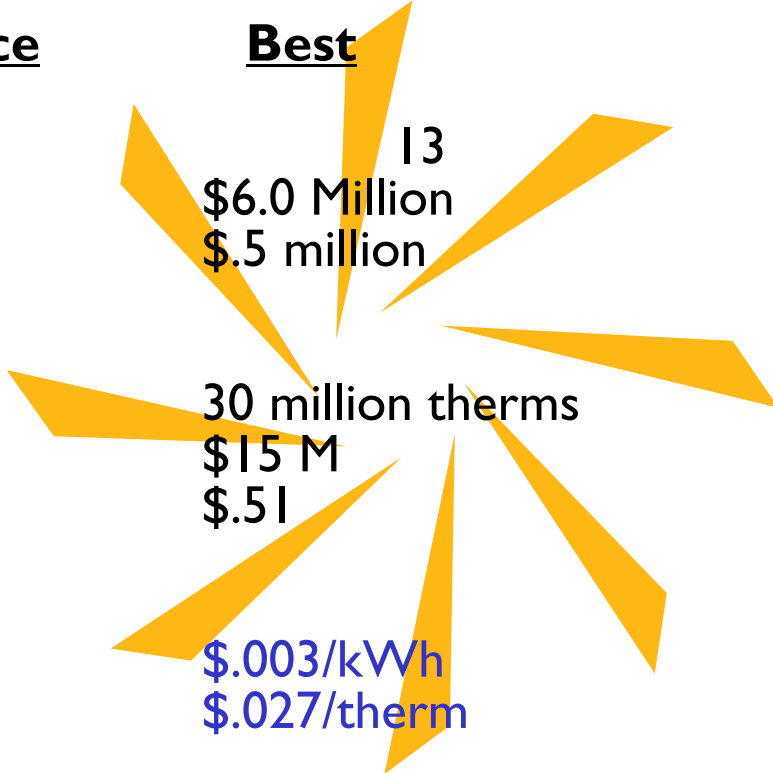
**NW Alliance and Energy Trust combined

*** Assumes that efficient duct sealing is incorporated into code in several years.

Program Cost and Savings for Market Transformation Scenario

Total Savings & Cost:

	<u>High Confidence</u>	<u>Best</u>
<u>Electric</u>		
Ave MW	8.4	13
ET Cost	\$12 million	\$6.0 Million
\$/AMW	\$1.4 million	\$.5 million
<u>Gas</u>		
Therms	2.4 million	30 million therms
ET Cost	\$9.4	\$15 M
\$/Annual Therm	\$4.0	\$.51
<u>Levelized Cost:</u>		
Electric	\$.007/kWh	\$.003/kWh
Gas	\$.17/therm	\$.027/therm



How We Revised the Analysis

1. Incorporated new information since completion of the NW Alliance analysis:
 - non-program efficiency activity (including response to ODOE tax credits) and
 - updated measure cost and savings based on more detailed definitions and simulation.
2. Combined budgets and impacts for the two programs in ET service territory.

How We Revised the Analysis Continued

1. Estimated impacts through 2025 from a nine year program.
2. We developed a “reasonable confidence case” not a “high confidence case”. There is always risk in market transformation, worst case involves expenditures tailing off quickly due to negligible uptake.
3. NW Alliance staff suggested that we’re too conservative. The “Best case” incorporated their suggestions.

How Does the Program Work?

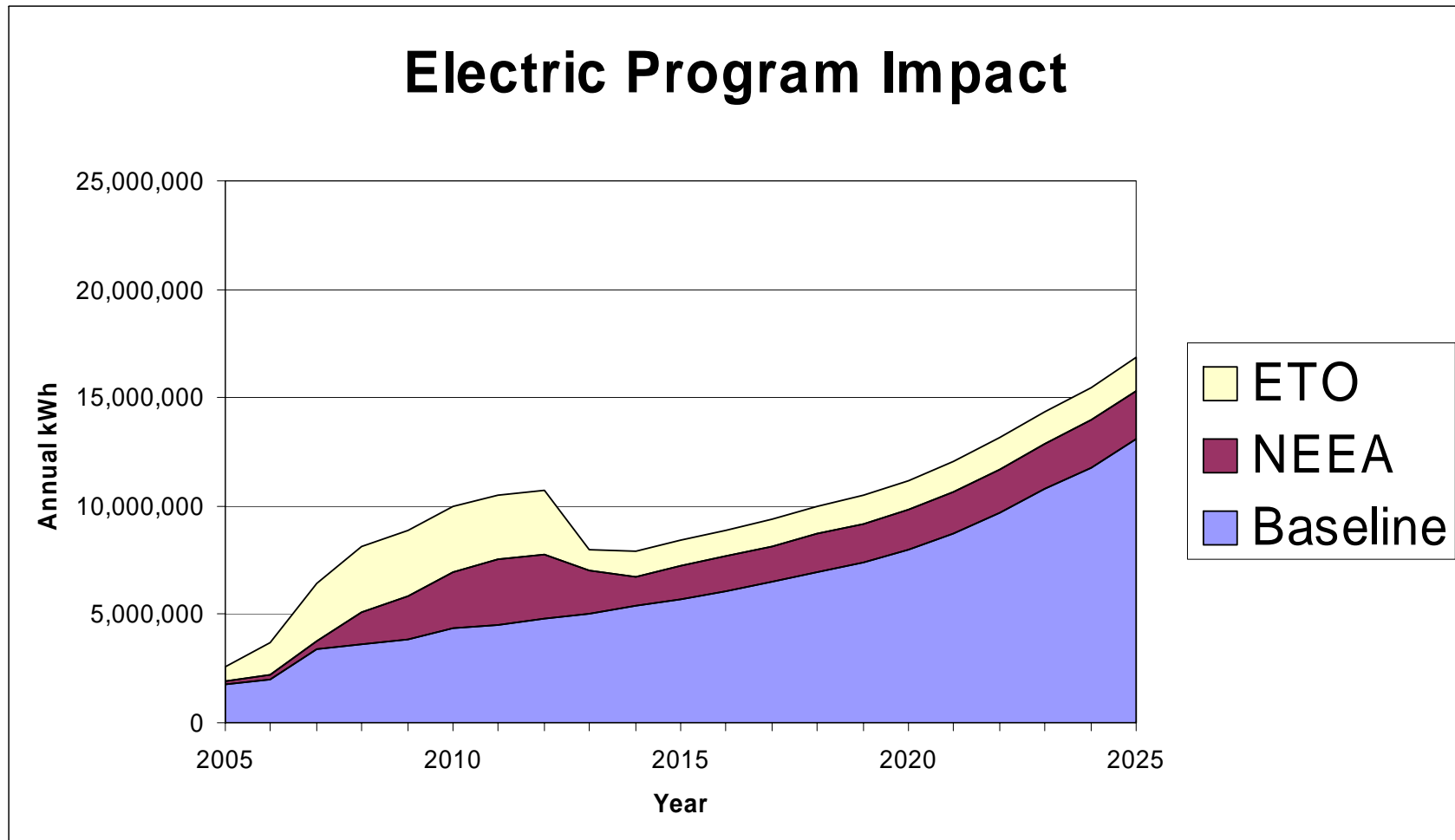
It Expands the Market for Efficient Home Components. Technology by technology, there is a lot of baseline (without program) efficiency activity:

- Windows
- Furnaces and electrically commutated motors
- New Federal heat pump standard in 2006.

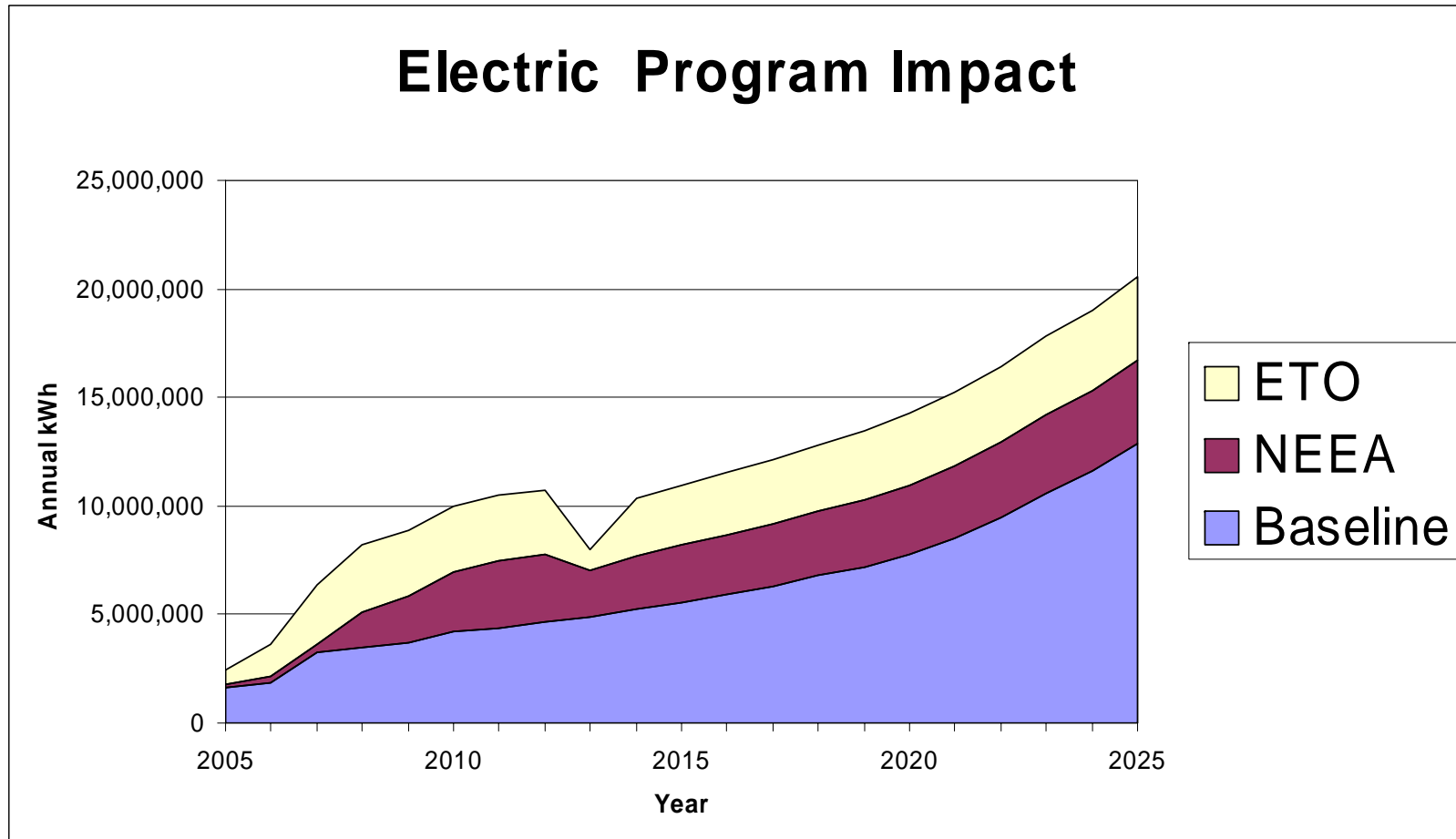
But, success with several “big ticket” measures depends on the ET/NW Alliance program

- Duct sealing
- Heat pump installation quality

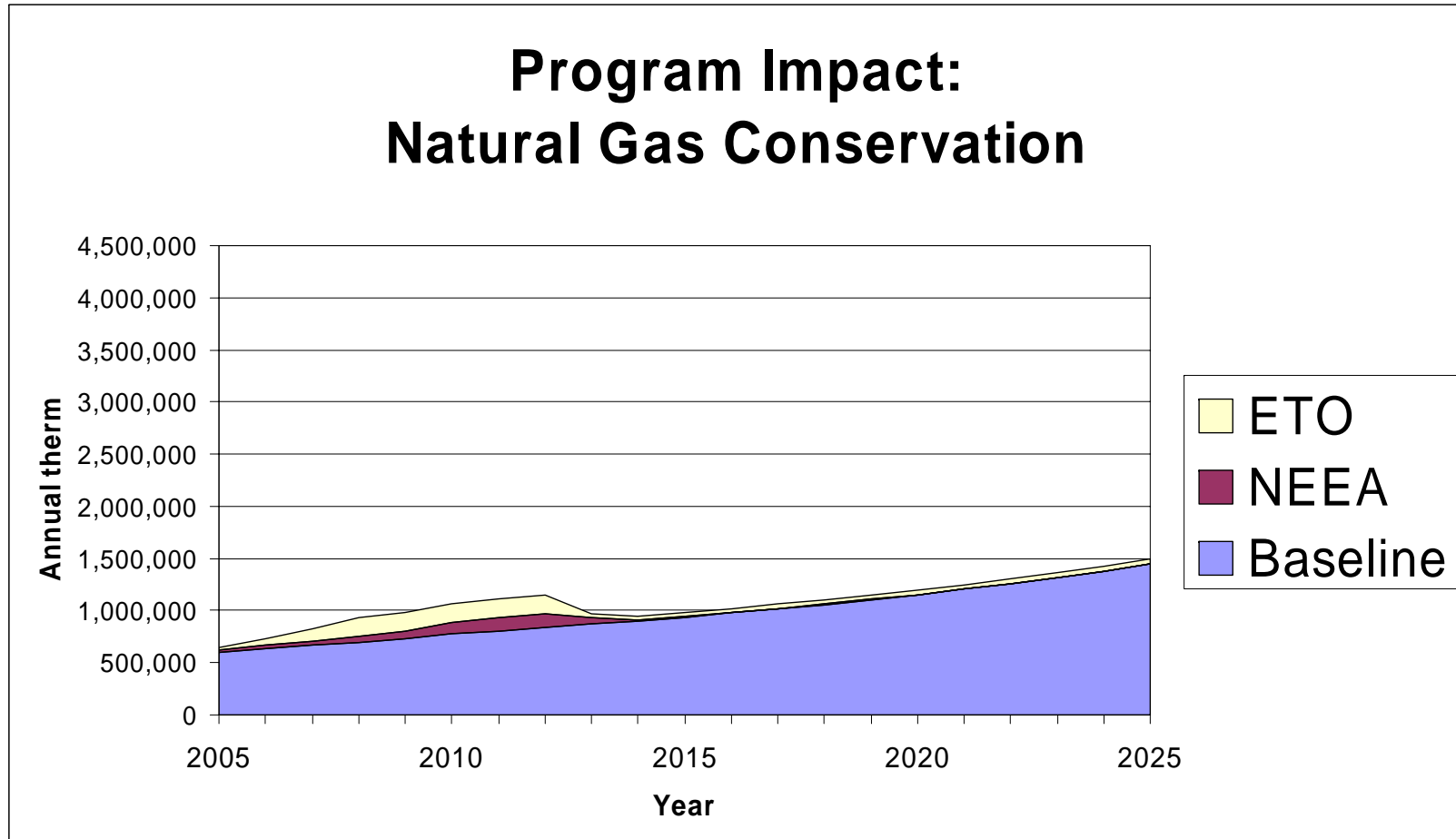
Program Modestly Augments Market Savings in Reasonable Confidence Case



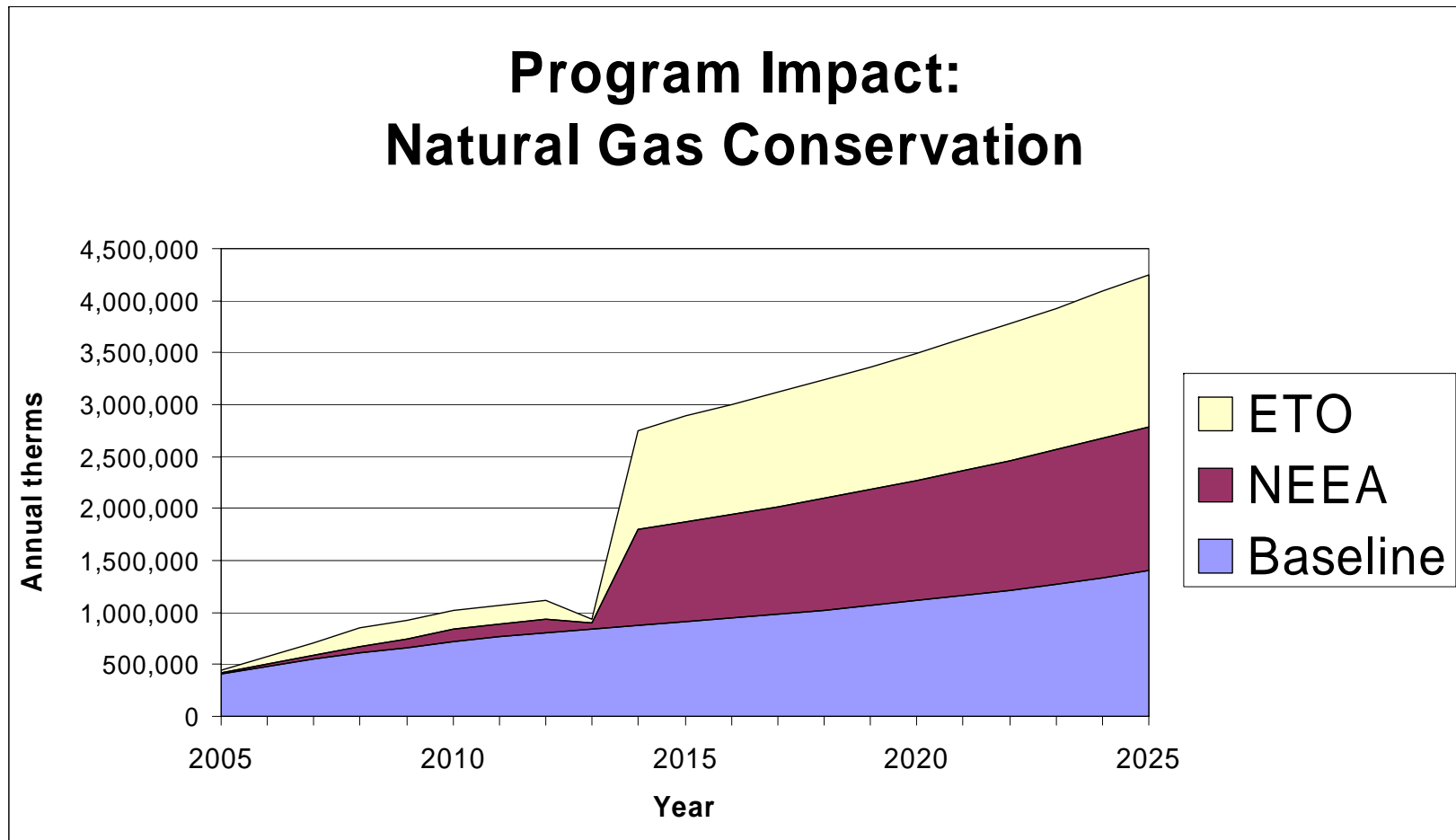
Impact on Market in Best Case is About the Same in 2011, but Much Larger by 2025



Reasonable Case for Gas Shows Modest Market Impact

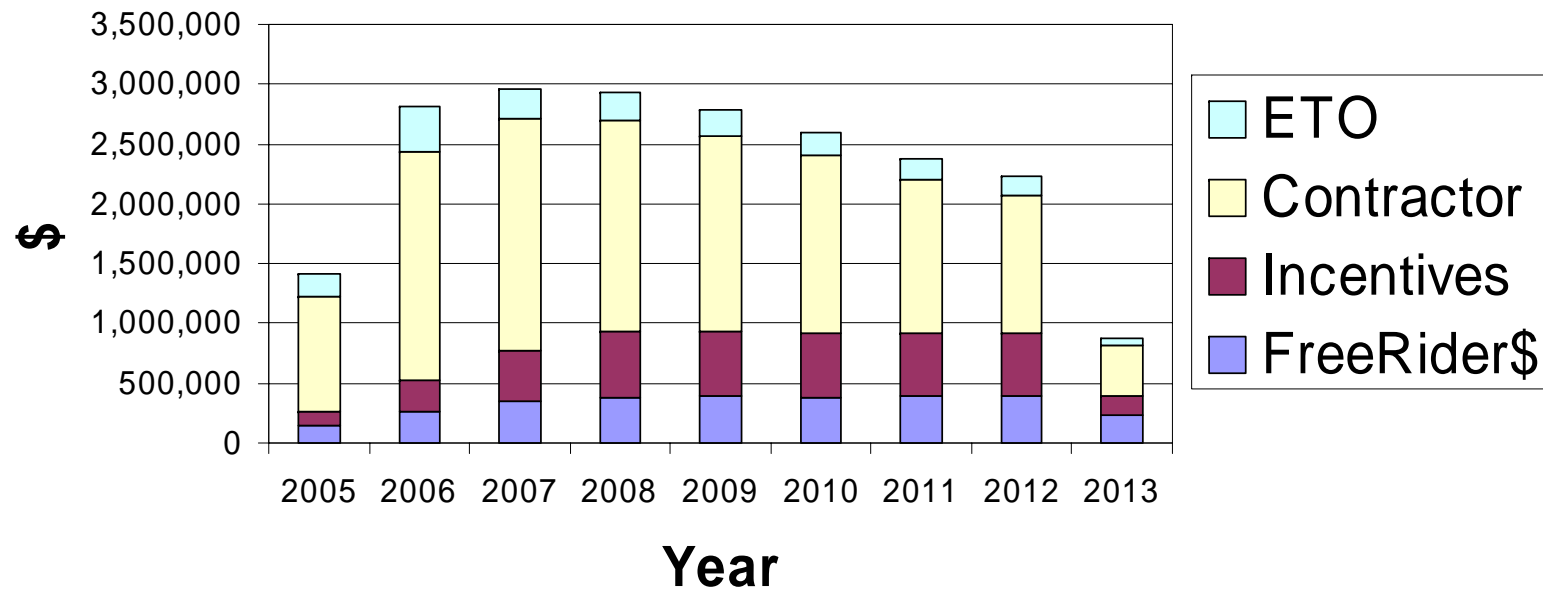


High Confidence Case for Gas is Dramatically Higher

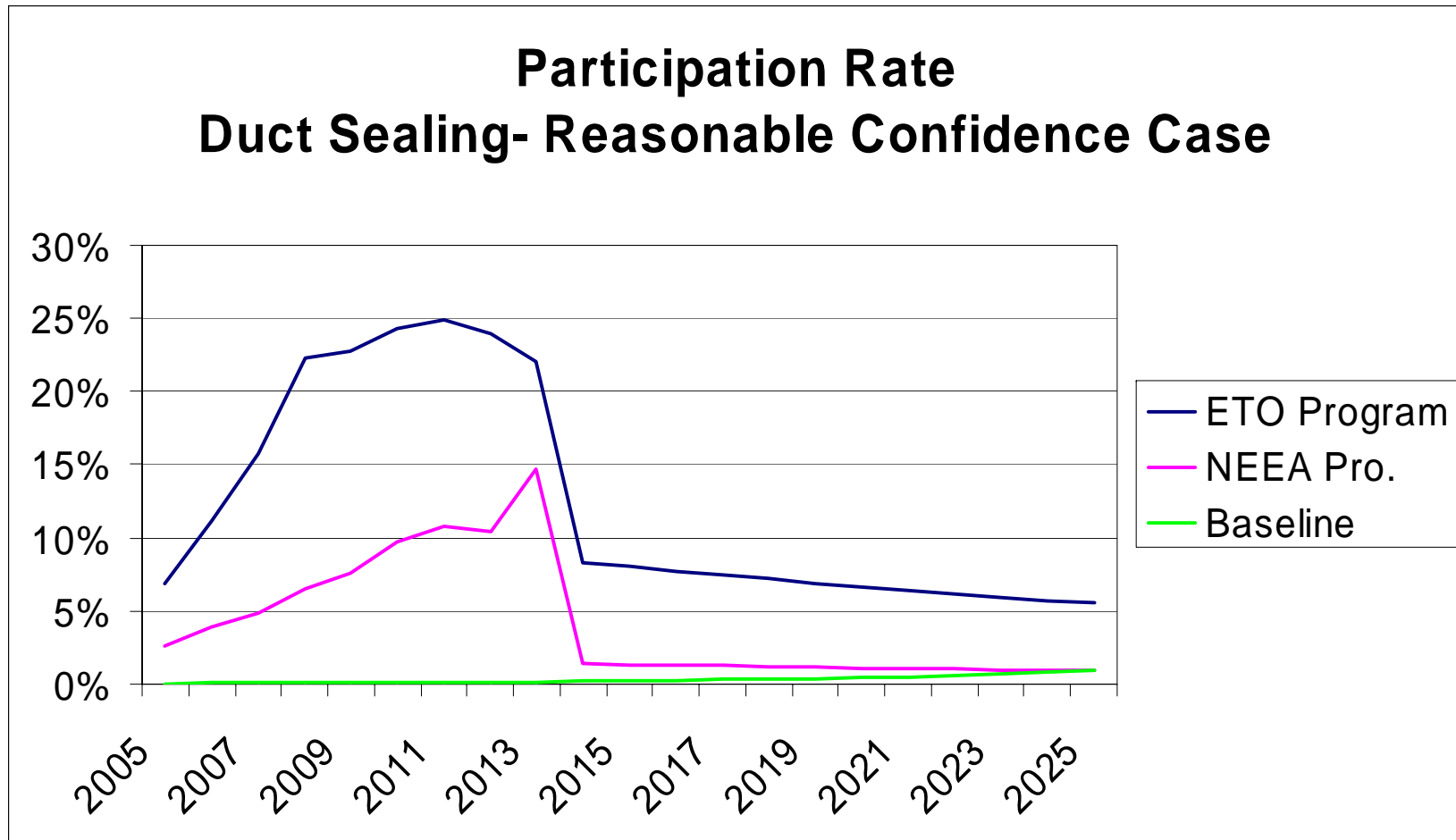


Free Riders are a Minor Part of Program Costs

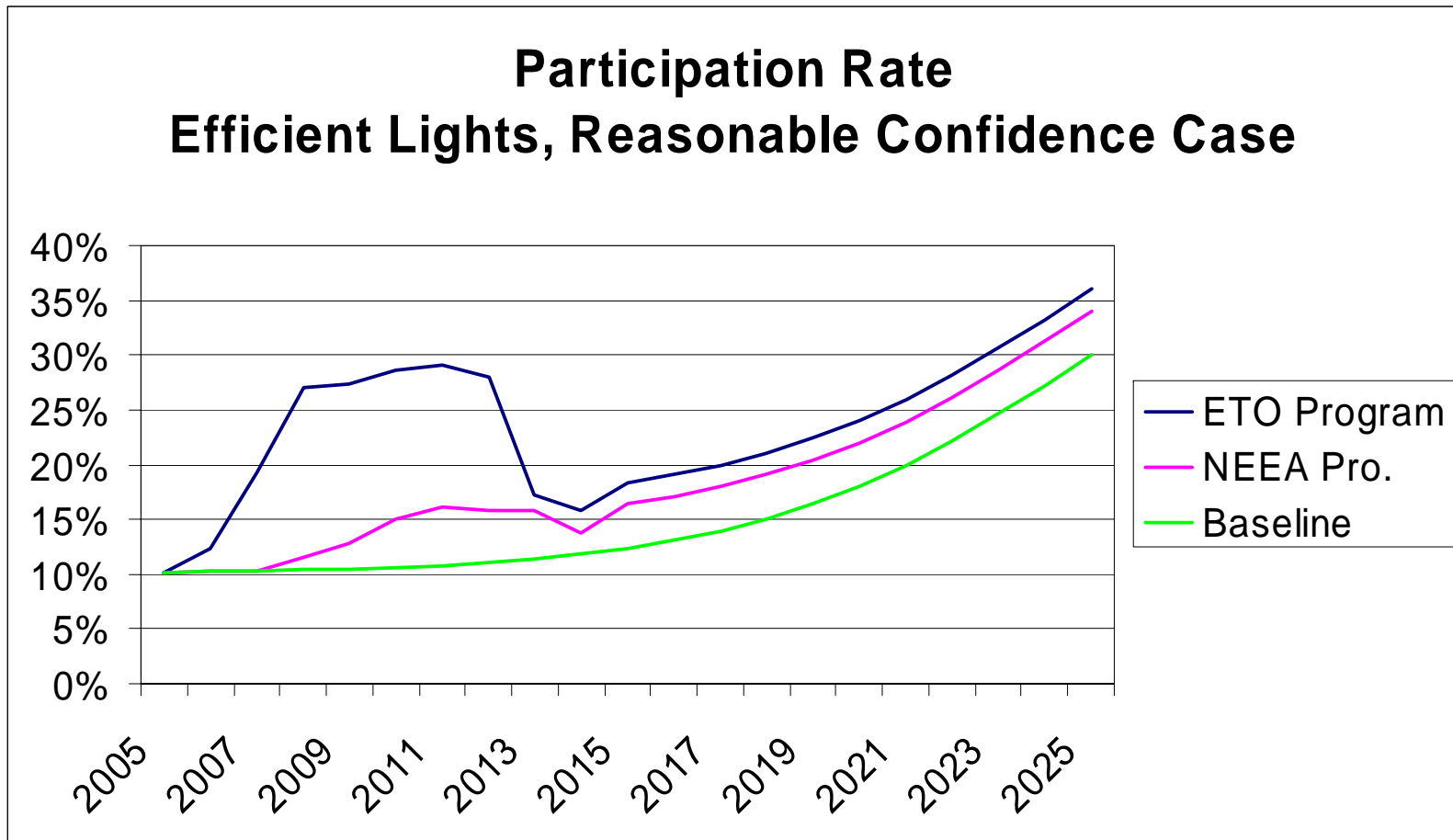
ETO Program Cost Components- Reasonable Confidence Case



Technology-Specific Forecasts Were Based on Market Knowledge and Judgment



Another Example- Compact Fluorescents



Other candidates for Energy Trust market transformation analysis:

- New manufactured housing- ET only program building on successful ODOE effort.
- Efficient home products- NW Alliance and Energy Trust coordinated programs.
- Gas furnaces- ET and NW Natural initiative.
- Premium T-8 lamps and ballasts.