

Smart Ideas for Your Home

Results for the *Enhanced All-Electric Home Performance Tune-Up (Air Sealing Pilot)*

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If you:

- Provide 2 technicians and a blower door for 4 hours to an all-electric home
- Seal common air leaks
- Perform pre- and post- tests for savings verification

Can you:

- Cost-effectively reduce heating load due to air infiltration



Total Program Scope

The pilot was an “enhancement” to ComEd’s *All-Electric Home Performance Tune-Up*, which includes:

1. Home energy survey
2. Installation of up to 10 CFLs, low-flow sink aerators and showerheads, and up to 12’ of hot-water pipe insulation

Pilot elements:

- Perform pre-implementation blower door test to determine baseline
- Determine minimum cfm requirements using ASHRAE Standard 62-89
- Seal most significant air leaks throughout the home (if 5<4)
- Perform post-implementation blower door test
- Customer co-pay: \$125

Enhanced pilot program scope implemented in 91 homes, excluding 8 homes due to minimum cfm requirements not being met.

Direct install contractor, Honeywell, provided QA/QC of air sealing subcontractor.

Typical Improvements

- Insulated plumbing & electrical penetrations in basement, attic & under sinks
- Installed weather stripping & caulk around windows
- Installed weather stripping & door sweeps around exterior doors
- Sealed supply/return vents & bathroom exhausts
- Installed weather stripping around attic hatch
- Insulated recessed lights
- Insulated attic ducts
- Air sealed basement rim joist and attic perimeter



Sample Data Collections & Calculations

Annual kwh	Sq.Ft.	Vol.	N Factor	Pre-test	Post-Test	Min Bldg Airflow ASHRAE 62-89	CFM Available	CFM Reduced	CFM missed	% Savings from absolute	% Savings from available	Notes
23,220	889	8,001	18.5	1,283	1,085	863	420	198	222	15.4%	47.1%	
18,423	1,520	25,840	15.4	2,885	2,520	2321/ 1155	564	365	199	12.7%	64.7%	
40,665	2,780	47,260	18.5	3,350	3,350	5,100	0	0	0	0	0	Minimum bldg airflow higher than pre-test

	Base Program (CFLs, etc.)	Air Sealing	Total Program
Average Implementation costs per home*	\$400	\$851	\$1251
Average gross savings per home (kwh)**	897	488	1,385
Percent of total electric bill	3%	1.7% (2.9% of heating)	4.7%
Cost per Gross Mwh saved	\$446	\$1,745	\$903
Payback***	3.8 years	14.9 years	7.7 years

*CFL & water devices implemented in 635 homes, air sealing implemented in 91 homes of those homes.

**Air infiltration calculated using DOE2 modeling, validated with TREAT & REM/Rate models

***Payback based on \$0.117/kwh