

Energy Efficiency Upgrades Task Force

Richard Morgan
Austin Energy

The Task Force

| | |
|------------------------------|----------------------------------|
| Austin Board of Realtors | Austin Apartment Association |
| Lenders and Mortgage Brokers | Real Estate Council of Austin |
| Real Estate Inspectors | BOMA & IFMA |
| Boards & Commissions | Building Performance Contractors |
| Affordable Housing Advocates | Energy Efficiency Advocates |

The task force met from January to September 2008

Task Force Goals

- To increase energy efficiency in existing homes and buildings
- To make housing more affordable through energy efficiency
- To reduce peak demand and decrease the need for new power plants
- To encourage the private sector to improve energy efficiency in existing homes and buildings
- To minimize disruption to the existing real estate transaction process

Single Family Homes

- Mandatory energy audit and disclosure before sale
- Auditors certified by Austin Energy
- Audit to identify savings and costs of recommended improvements

Single Family Goals

The percentage of non-exempt homes sold each year that would perform upgrades with a seven year pay back would grow as follows:

| | |
|--------|-----|
| Year 1 | 25% |
| Year 2 | 45% |
| Year 3 | 65% |
| Year 4 | 85% |

Multi Family Buildings

- Energy audit within 2 years
- AE Certified 3rd. Party Auditors
- Results of audit shared with Austin Energy, tenants, and buyers
- Rating system to disclose energy use to tenants in a “meaningful way”

Multi Family Goals

| <u>Year Built</u> | <u>80% perform 7 year Pay Back Upgrades</u> | <u>Enhanced Rebates</u> |
|-------------------|---|-------------------------|
| Pre 1970 | 2 years | 150% |
| 1970-1980 | 4 years | 125% |
| 1980-1999 | 6 years | none |

Enhanced rebates only apply to upgrades with a payback period of 3 years or more

Upgrades to High Energy Use Multifamily Properties

- High use = 150% of Austin average
- After notification 90 days to perform audit
- 18 months to reduce energy use to 110% or less of Austin average
- Exemptions for high occupancy, etc.

Commercial Buildings

- All buildings rated under EPA Portfolio Manager or equivalent in 2 years
- Results of rating shared with Austin Energy and potential buyers

Commercial Goals

- Within 5 years;
 - Low rating buildings, improve rating by minimum of 20% or up to national median score of 50, or
 - Other buildings, improve rating score by 20% or up to EPA Energy Star Building score of 75

Results if Goals Are Met

The average energy efficiency increases of existing stock would increase as follows:

| | |
|---------------|--------|
| Single Family | 12-15% |
| Multi Family | 10-16% |
| Commercial | 20% |

Single Family Savings

Ten year savings

Typical annual savings = $\$242 \times 10 =$ \$2420

Typical Cost - 1066

Ten year savings \$1354

Impact by Building Sector

| | Single Family | Multi Family | Commercial |
|--|--|---|---|
| % improvement in sector energy efficiency | 12%-15% | 10%-16% | 20%+ |
| Total Cost of Upgrades | \$70,746,075 | \$40,636,700 | \$83,600,000 |
| Cost of Rebates | \$21,638,000 | \$23,836,700 | \$33,155,000 |
| Cost to Property Owners ¹ | \$49,108,075 | \$16,800,000 | \$50,450,000 |
| Annual Energy Savings ² | \$11,149,530 | \$5,843,909 | \$38,593,874 |
| Simple Payback in Years | 4.4 | 2.9 | 1.3 |
| 10 Year Net Cumulative Energy Savings ² | \$62,387,225 (\$111,495,300 <u>-49,108,075</u>) | \$41,639,090 (\$58,439,090 <u>-19,800,000</u>) | \$335,488,740 (\$385,938,740 <u>-50,450,000</u>) |

1. Cost to property owners is after rebate cost

2. Energy savings are based on current utility rates and are thus conservative

Community Impacts

- Demand reduction 225 mW
- Annual CO₂ reduction 365,291 MT
- Cost of rebates \$78 Million
- Cost per MT of CO₂ \$53

Costs and Benefits to Property Owners and City

| | |
|--|--|
| <p>Cost to Property Owners \$116 million <i>cost for upgrades</i></p> | <p>Benefits to Property Owners \$556 million <i>utility bill saving at current rates</i></p> |
| <p>Cost to Utility Rate Payers \$78 million <i>rebates for program participants</i></p> | <p>Benefits to Utility Rate Payers \$337 million <i>avoided power plant capital costs</i> and \$15 Million <i>value of carbon credits</i></p> |
| <p><u>Total</u> \$194 million</p> | <p><u>Total</u> \$908 million</p> |
| | <p>and 3.65 million metric tons CO₂, 2,302.7 metric tons of Sulfur Dioxide, and 2,546.2 metric tons of Nitrous Oxides reduced</p> |

Summary of Unanimous Recommendations of Task Force

- Single Family Homes – mandatory energy audit and disclosure at point of sale
- Commercial Buildings – mandatory EPA energy rating of all buildings within two years, shared with Austin energy, and at point of sale
- Multi Family Buildings –
 - mandatory upgrades for high energy use apartment properties
 - Mandatory energy audit within two years, with comparative rating system developed for prospective tenants
- Re-assess after 2 years