



Energy Conservation Audit & Disclosure Ordinance

First Year Status Report

Ordinance No. 20091106-47

City Code 6-7, June 2009





Residential

- Austin home sales: 9,549
- 3,999 ECAD exempted
- 4,862 ECAD audits received
 - Energy audit :
 - Weatherization
 - Duct Leakage
 - Attic Insulation
 - Solar Shading
 - Identifying opportunities for upgrading HVAC systems, home appliance, Austin Water qualified conservation measures



Residential Audit Results



- Ducts leak almost twice the code standard 10%
- Older homes need 10 inches of insulation
- 96% of audited homes received at least one energy efficiency recommendation:
 - 78% need in-home weatherization
 - 58% need solar shading
 - 68% need HVAC air duct system renovation and sealing
 - 79% need additional attic insulation



Expected Savings

- 4,862 Audited Homes
- Potential annual savings:
 - 7,788,000 kWh/yr
 - \$723,650 per year
 - 3.9 MW saved
 - Equivalent to powering 650 homes
 - Emissions:
 - 4,897 Tons of CO₂/yr





Improvements Created

- Auditors certification and training
 - RESNET & BPI Affiliates:
 - Private Training Centers
 - Community College
 - Grant Funded Programs
- ECAD database
- Public information
 - Website, marketing collateral, advertising, press briefings, real estate group presentations, and 311/AE call center



Austin City Council Resolution



- City Council Resolution Goal for First Year:
 - 25% of Homes Sold to Receive Retrofits
 - Currently tracking 10% participation
- Overall increase in Rebate Program





Multifamily Properties

- Requires energy audit performed no later than June 1, 2011
- Multifamily property profile
 - Number of properties: 1,411
 - Number of properties needing audit: 1,196



Multifamily Properties

- High usage properties must implement energy efficiency improvements
- Energy utilization index (EUI) benchmark
 - Six categories were created:
 - All Electric or Gas and Electric built prior to 1985
 - All Electric or Gas and Electric built between 1985 and 2001
 - All Electric or Gas and Electric built between 2001 and present



Multifamily EUI

Preliminary energy utilization index (EUI)

kWh/Usage per Sq. Ft.	<i>Built prior to 1985</i>	<i>Built between 1985 and 2001</i>	<i>2001 to Present</i>
All Electric	12.1	13.2	10.8
Gas & Electric	10.4	9.1	8.1



Preliminary Results

High Use	<i>Built prior to 1985</i>	<i>Built between 1985 and 2001</i>	<i>2001 to Present</i>
All Electric	44	8	3
Gas & Electric	8	3	0

- 66 high use properties
- Average size: 505 square foot
- Currently verifying data



Audit Approach for Multi-family Properties

- ECAD enhanced rebates to encourage participation
 - Audit data points similar to rebate data collection
- ECAD auditors training
 - Duct remediation/sealing
 - Attic insulation
 - Solar shading
 - Demand response: water heater timers, energy miser, thermostats
 - Lighting
 - HVAC
 - Reflective roofing



Commercial Building Energy Ratings

- Report building rating by June 1, 2011
 - Two building energy rating systems
 - EPA Energy Star Portfolio Manager
 - Austin Energy's "Business Audit" tool
- www.austinenergy.com/go/businessaudit

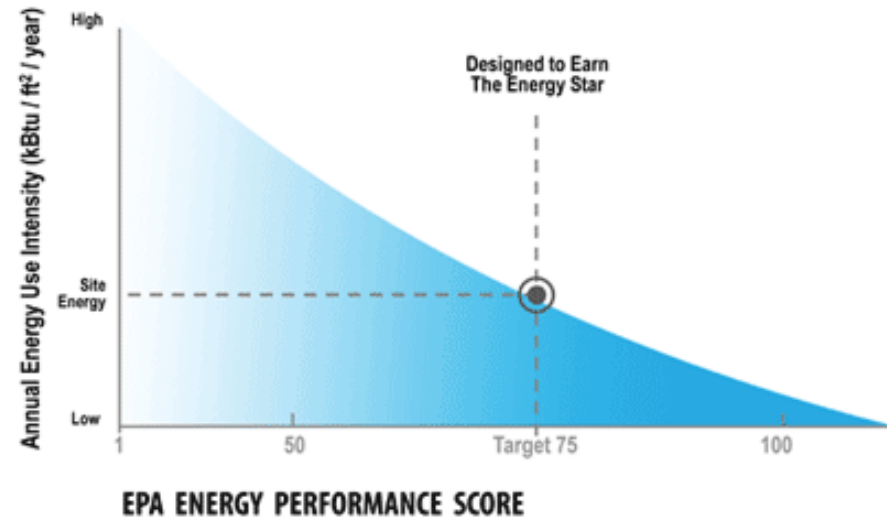


Portfolio Manager



Types of Commercial Buildings:

- Bank/Financial Institution
- Courthouse
- Data Center
- Hospital (acute care and children's)
- Hotel
- House of Worship
- K-12 School
- Medical Office
- Municipal Wastewater Treatment Plant
- Office
- Residence Hall/Dormitory
- Retail Store
- Supermarket
- Warehouse (refrigerated and non-refrigerated)



Austin Ranks 18th in US Cities for Energy Star Rated Building
Disadvantage is that it doesn't rate all buildings.



Portfolio Manager



- Ratings received: 45
 - Highest rating 95
 - Lowest rating 22
 - Variances: 3 for high energy use



- Energy Star Buildings (Not Reported to AE):
 - 32 building are listed as ES in 2010
 - 44 building are listed as ES in 2009





Lessons Learned

- ECAD energy audit not onerous
- Outreach and awareness campaign
- Audit form technical and difficult to interpret
- Point of violation difficult to enforcement residential
- Not all properties are clearly addressed
 - Condominiums
 - Commercial buildings
- Need more comprehensive database

