



Green Building & Affordable Housing

Low Income Consumer
Advisory Task Force

Richard Morgan, GB&S Manager
December 10, 2014





Austin Energy Green Building

- First Green Building program and rating system in the U.S. – 1991
- Early and continuing emphasis on housing at all income levels
- Collaboration with Neighborhood Housing and Community Development since 1999
- Ongoing work with energy codes supports energy efficiency in all buildings



Affordable Housing

- AE Green Building – Neighborhood Housing & Community Development 1999 MOU
 - All housing receiving incentives from NHCD must achieve one-star GB rating
 - Single family homes and multifamily properties



Affordable Housing Impacts

Impacts of Green Building Ratings on S.M.A.R.T. Housing

Program	Total Units SMART Housing	Cumulative Savings to date (\$/.089/kWH)	Annual Savings Forward (\$/.099/kWH)
Single Family	5,551	\$4,272,739	\$781,380
Multifamily	2,471	\$1,671,198	\$297,891
Totals	8,022	\$5,943,937	\$1,079,271
Typical Savings Per Household	8,022	\$740.95	\$134.54



Energy Codes & Affordable Housing

- Enhanced energy codes are important to affordable housing
 - Low income housing is typically built to minimum code standards
 - Energy use/sq ft is typically higher for small house than for larger houses-internal heat gains are higher
 - Same or more people - lower sq ft
 - Same major appliances/systems - less sq ft
 - Builder focus on first cost not comfort & efficiency



Pecan St. Doris Duke Grant Report

Analysis of 72 homes - 960 sq ft to 3,796 sq ft

Similar demographics and housing characteristics

34 homes < 1,500 sq ft

38 homes > 1,500 sq ft

10 least efficient homes (EUI > 7.0 kWh/ sqft)

8 < 1,500 sq ft

2 > 1,500 sq ft

10 most efficient homes (EUI < 2.4 kWh/sqft)

1 < 1,500 sq ft

9 > 1,500 sq ft



Zero Energy Capable Homes

- 2007 Austin Climate Protection Plan
 - All new homes built after 2015 must be net zero energy capable homes (ZECH)
 - ZECH = energy efficient enough that it is cost effective to install on-site gen to make homes net zero
 - Code cycles 2006, '09, '12 reduced energy use for typical single family home by 3,904 kWh/year or \$386.50 per year/home going forward



Guadalupe Saldana Net Zero

Austin Energy & Guadalupe Neighborhood Development Corp.

- 4 duplexes - 8 units
 - Built to Zero Energy Capable Homes energy efficiency standards
 - AE supplies Solar to offset remaining energy use of units to make net zero
 - Residents moved in October, 2013
To date all units have generated as much energy as they have used
 - AE monitoring use to plan for future programs/codes
- Build out will be up to 60 units net zero over several years



THANK YOU!

Richard Morgan

Green Building & Sustainability Manager
Customer Energy Solutions

richard.morgan@austinenergy.com

 twitter.com/aegreenbuilding

 facebook.com/aegreenbuilding

