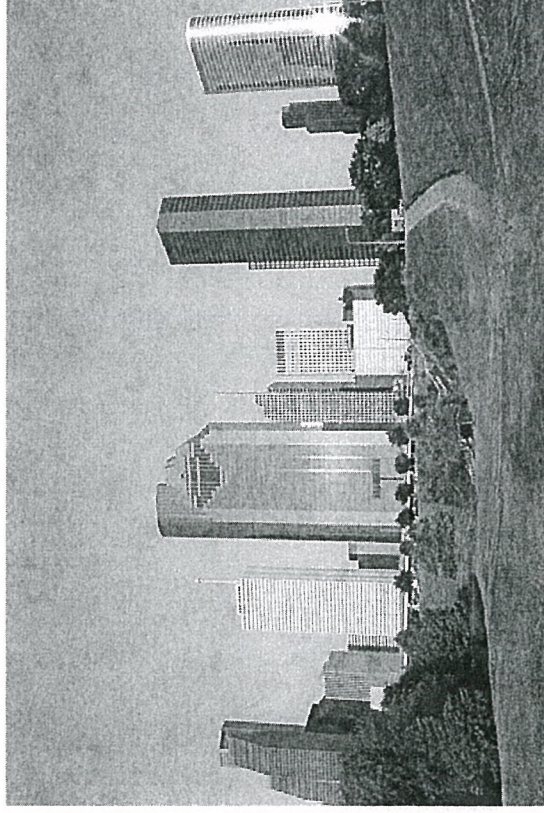


City Council
Transportation, Technology, and Infrastructure Committee
Residential Energy Conservation Code 5%

November 12, 2013



Public Works & Engineering
Planning and Development Services
Code Enforcement

Code Change Language

SECTION 110 INCREASED STANDARDS

110.1 General. For any permit application filed under this code, compliance with additional performance objectives for new construction shall be required to achieve a minimum ~~ten~~ fifteen percent improvement in efficiency above the minimum provisions of this code.

110.2 Energy use. New residences and apartments must use ~~10-15~~ percent less energy as shown by one of the methods indicated in Sections 110.2.1, 110.2.2, ~~and~~ 110.2.3 and 110.2.4.

Code Change Language

SECTION 110 INCREASED STANDARDS

110.2.1 Energy Star. The United States Environmental Protection Agency's ENERGY STAR Program certification of energy code equivalency, or other approved above code program; or

110.2.2 Software and testing. Energy code compliance modeling through approved software; along with testing of the building thermal envelope for infiltration and the duct system for leakage when applicable; or

110.2.3 Option packages. Prescriptive option packages approved by Texas A&M Energy Systems Laboratory and listed in Table 110(1), Table 110(2), or Table 110(3) or subsequently approved by Texas A&M Energy Systems Laboratory and accepted and published by the code official.

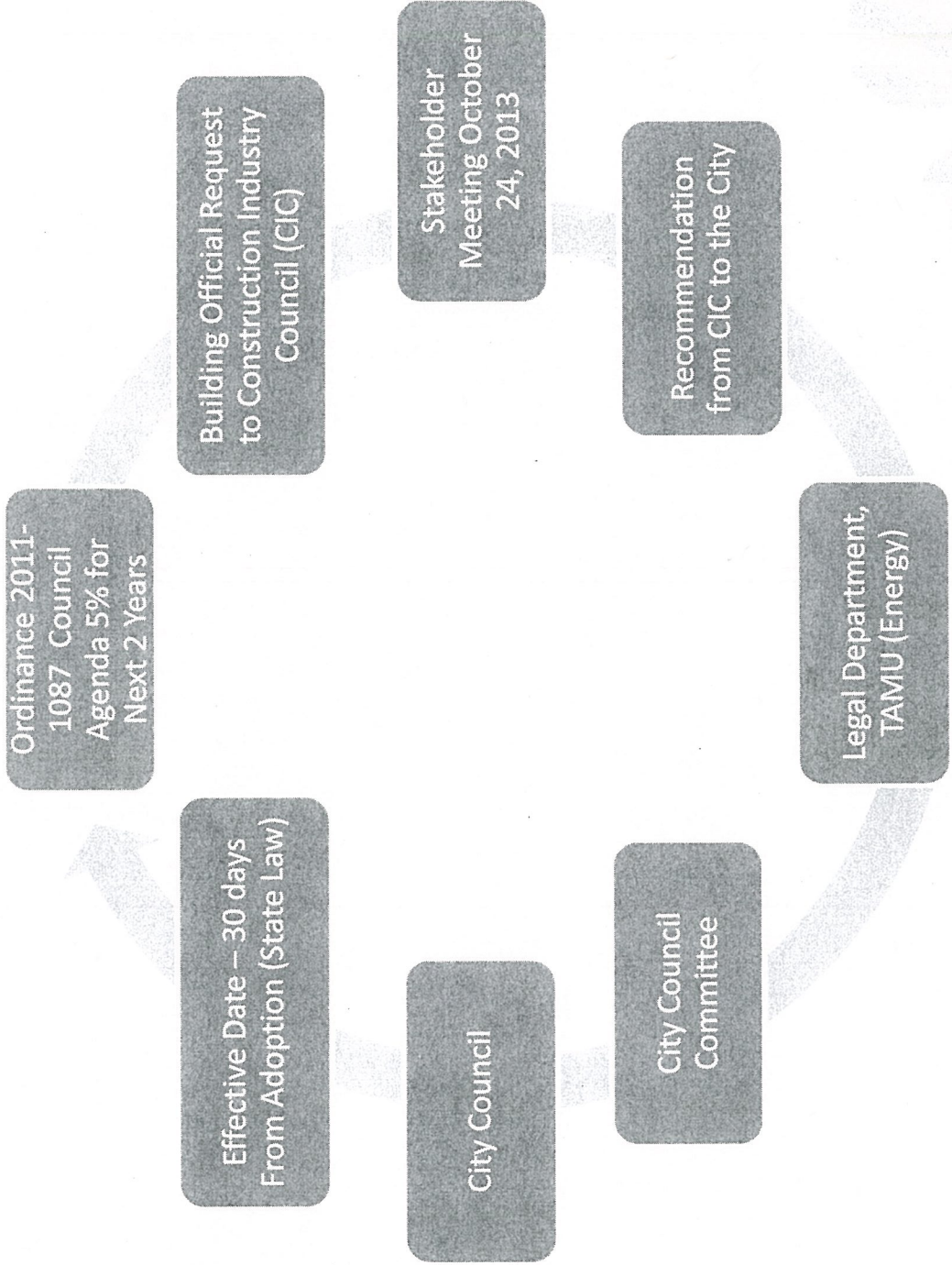
**TABLE 110(1)
COMBINED ENERGY SAVINGS FOR ONE AND TWO FAMILY STRUCTURES
WITH ELECTRIC / NATURAL GAS HEATING**

Groups	Measures	Notes
Group 1	Photovoltaic Array for Partial Demand at 2kW Ducts located in conditioned space	3 5
Group 2	Photovoltaic Array for Partial Demand at 4kW	4
Group 3	Improved SEER (minimum 18) Improved Furnace Efficiency (minimum .95 AFUE) Tankless water heater (minimum EF.748) Ducts located in conditioned space	9 11 7 5
Group 4	Reduced Air Leakage to 5 ACH 50 Improved Envelope Insulation (ceiling minimum R-38; For wall: minimum R-13+5 or R-20) Install Radiant Barrier Improved Fenestration (Maximum U-0.35, SHGC-0.25)	8 12 13 10
Group 5	Solar Domestic Hot Water System (32 sq. Ft. collector area) Ducts located in conditioned space 100% Energy Star CFL Indoor Lamps	2 5 6
Group 6	Improved Fenestration (Maximum U-0.35, SHGC-0.25) 100% Energy Star CFL Indoor Lamps Improved SEER (minimum 18)	10 6 9

Code Change Language

110.2.4 Performance Approach. Demonstrating improved efficiency by compliance with Section R405 of the 2012 International Energy Conservation Code, as published by the International Code Council.

Energy Code Update Process

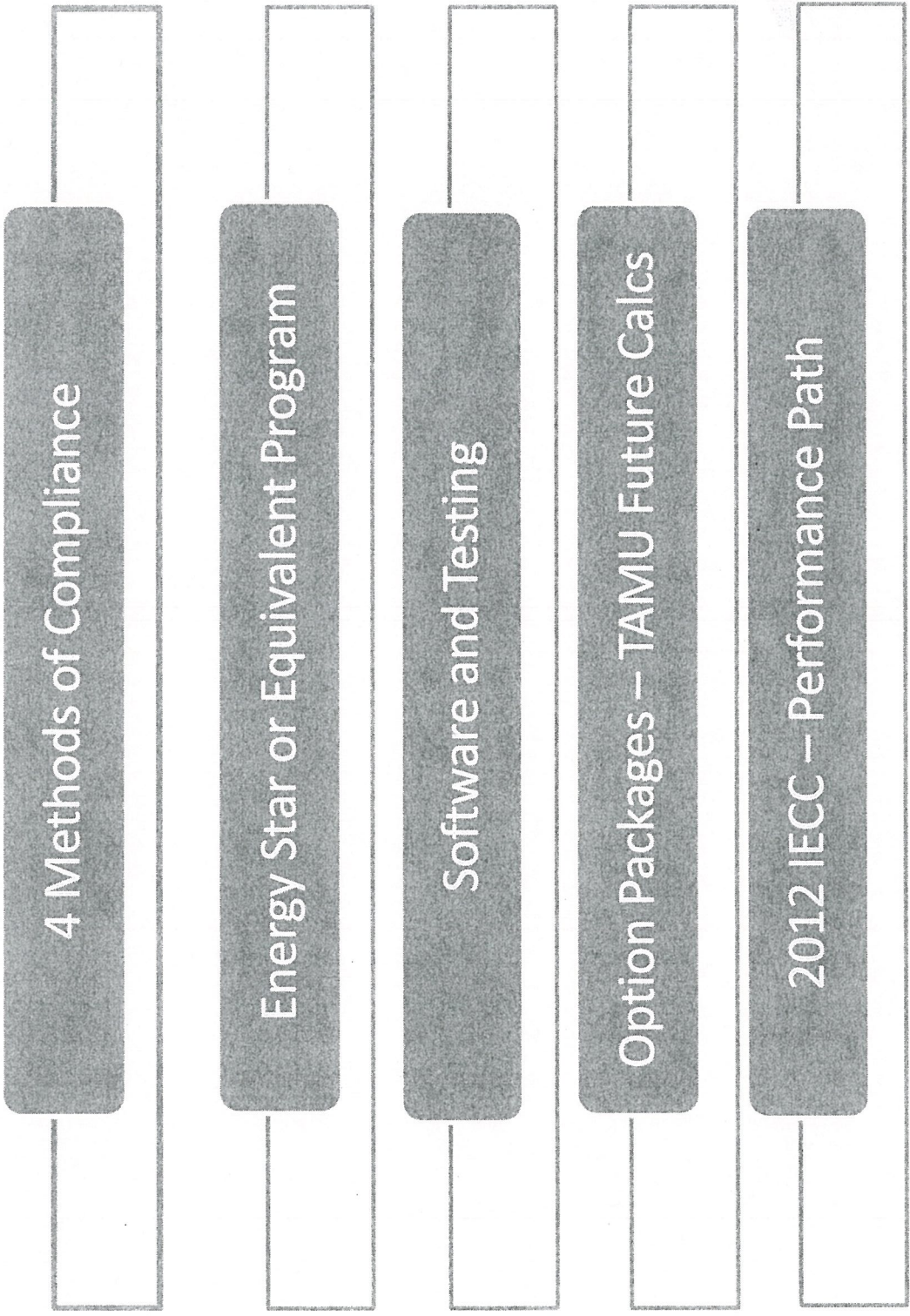


Construction Industry Council

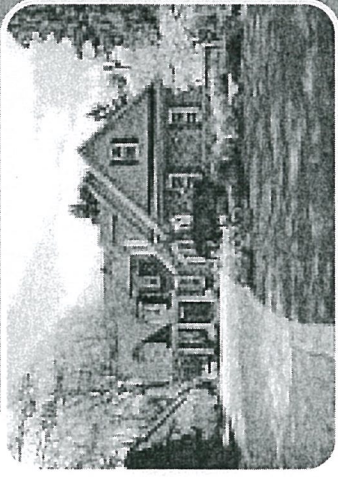
◆ Associations:

Air Conditioning Contractors Association / **American Fire sprinkler Association**
Association of Chief Operating Engineers / American Forest & Paper Association/
American Society of Heating, Refrigeration and Air Conditioning Engineers
American Institute of Architects / American Society of Plumbing Engineers /
American Society of Sanitary Engineers / **Associated General Contractors** /
Associated Builders and Contractors / Building Owners and Manager Association /
Construction Specifications Institute / **Greater Houston Builders Association** /
Greater Houston Restaurant Association / Gulf Coast Building & Construction
Trades Association / **Houston Apartment Association** / Houston Area Glass
Association / Houston Contractors Association / **Houston Real Estate Council** /
Houston Sheet Metal Contractors Association / Independent Electrical Contractors /
Institute of Real Estate Management / Mechanical Contractors Association /
National Association of the Remodeling Industry / **National Electric Contractors**
Association / National Fire Sprinkler Association / Plastic Pipe and Fitting Association /
Plumbing, Air Conditioning and Mechanical Contractors Association / Plumbing
Heating Cooling Contractors / **Society of Fire Protection Engineers** / Structural
Engineers Association of Texas / Texas Electrical Safety Association / **Texas Fire**
Sprinkler Contractors Association / Texas Institute of Building Design / Texas
Society of Professional Engineers / **US Green Building Council** / City of Houston Code
Enforcement / Houston Fire Department

Code Change 5 %



Code 2009 Residential Energy Conservation Code – Key Provisions



CURRENT ABOVE CODE ITEMS TO REMAIN:

- 15% Above Code Required for All New Buildings With 4 Optional Methods for Compliance
- Leakage Testing is Required for all New Construction
- Window Solar SHGC) Lowered for Alternate Calculation
- Replacement Lighting to Meet Code

Recommendation

Approve an ordinance to modify the City of Houston Residential Energy Conservation Code to increase energy efficiency by an additional 5% (to equal 15% total above code) for one and two family homes, townhouses and apartments up to three stories.

