



Texas Energy Code Compliance Collaborative

2014 Energy Code Adoption Report

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About the South-central Partnership for Energy Efficiency as a Resource (SPEER)

SPEER is an Austin, Texas based non-profit organization dedicated to increasing and accelerating the adoption of energy efficient products, technologies, and services. Much of SPEER's work focuses on finding the best market-based approaches to increase energy efficiency and overcoming persistent market barriers. SPEER serves as facilitator for the Texas Energy Code Compliance Collaborative, which is a stakeholder group that includes industry, advocacy and local governments working to increase the state's compliance with energy codes. For more information about SPEER, please visit:

www.eepartnership.org



I. Introduction:

Texas leads the nation in energy consumption and is the fifth largest energy consumer in the world. Its existing buildings account for almost 40 percent of the state's total energy use and 70 percent of electricity use. With a large and growing population, Texas represents a very large share of the new building market, and with it a significant opportunity for energy savings.

New construction is the most cost-effective point in the life of a building to establish energy efficiency elements. The building code enforcement process is devised to ensure that a building is not only designed with the right mix of components, materials, and equipment to meet efficiency requirements, but that construction and installation practices support the expected energy performance. State policymakers have established regulations with the intent to improve energy efficiency and reduce operating costs for their constituents, while protecting the air quality and natural resources of the state.

The purpose of this report is to document the status of the state's adoption and implementation of the energy code. Texas adopted state-wide energy codes beginning in 2001; however without the authority to enforce at the state level, adoption and enforcement is a local jurisdictional responsibility. The Texas Energy Code Compliance Collaborative (TECCC) was established to find ways for the state to assess and improve compliance with the energy codes, and to offer support to those local jurisdictions.

The TECCC is an industry stakeholder group that has worked together since 2011, to develop this project and will continue to contribute to the efforts to improve energy code compliance in Texas. The South-central Partnership for Energy Efficiency as a Resource (SPEER) has committed to provide coordination and support for the ongoing efforts of the TECCC. SPEER's work is supported by the Department of Energy, the State Energy Conservation Office (SECO) and a number of private grants.

II. State and Local Policy

Texas has adopted the following state energy codes for new buildings or significant upgrades to existing buildings:

- Residential (Single Family Residences and Duplexes) - Effective January 1, 2012 is the 2009 IRC, Chapter 11.
- State-Funded Residential Buildings - Effective June 1, 2011 is the 2009 IECC.
- Commercial and Residential (Excluding Single-Family Residences) - Effective April 1, 2011 is the 2009 IECC.
- State-Funded Commercial Buildings - Effective September 1, 2011 is the ASHRAE 90.1 2010.

These codes are effective statewide and establish a minimum or baseline for all building practices. However, Texas is a "home rule" state which allows for local jurisdictions to adopt amendments to



the energy code, so long as the change does not result in a less stringent code.¹ To amend the state code in non-attainment and affected counties², Energy Systems Laboratory (ESL) of Texas A&M University must first determine whether the amended code is as stringent as the existing state code. Code amendments that are determined to be as stringent as or more stringent than state code may be adopted through local ordinance. This authority also allows a local jurisdiction to adopt a newer version of energy code, so long as that code is more stringent than the state minimum.

There are a total of 1,212 cities, towns, and villages that have the authority to implement and enforce energy codes under Chapter 388 of the Texas Health and Safety Code.³ This law requires that all energy code adoptions by local jurisdictions be reported to SECO and that all Energy Code enforcement personnel be certified by the International Code Council (ICC) in the area of energy code that they enforce (Sec 388.03 (c)(2) of the Health and Safety Code).


In addition to the locally adopted codes, SECO has the authority to adopt standards for state-owned buildings (Chapter 447 of the Government Code), and has adopted by reference the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)/ Illuminating Engineering Society of North America (IESNA), Energy Standard for Buildings, ASHRAE/IESNA Standard 90.1-2010. The code (34 TAC Chapter 19, Subchapter C) applies to any state-funded new construction or major renovation project, except low-rise residential buildings, with a design assignment made on or after September 1, 2011. For the purposes of this code, a major renovation project is a building renovation or improvement where the implementation cost is \$2 million or more, based on the initial cost estimate.

Since 2009, unincorporated areas or counties have an option to adopt an energy code. This regulation (Subchapter F, Chapter 233, of the Texas Local Government Code) allows counties to adopt a residential code and create a permitting process. If adopted, the code must comply with the 2006 IRC, or the version of IRC applicable in the county seat. For example, where the county seat has adopted 2009 or 2012 energy codes, that same code would apply county-wide, once adopted by the county. However, there is no authority to collect permit or inspection fees, nor the authority for a county to enforce the energy codes. Instead, a builder is required to submit a form that demonstrates that the residential building has been inspected by one of a variety of professionals. There are exceptions to who is obligated to submit this information or request a permit for construction. Permits are more often required to ensure they follow subdivision standards, such as

¹ www.statutes.legis.state.tx.us/DOCS/HS/htm/hs.388.htm

² www.statutes.legis.state.tx.us/Docs/HS/htm/HS.386.htm

³ www.statutes.legis.state.tx.us/DOCS/HS/htm/hs.388.htm



septic, flood plain, easement, or storm water requirements set by the county. Jefferson County provides a good example of a posted code adoption and permit requirements⁴.

Unincorporated areas have limited authority to inspect commercial buildings for compliance with any building code. This authority is limited to fire inspections, and applies in only the 20 counties above 250,000 in population.

III. Population and Building Distribution

To examine the impact of local adoption and enforcement of building codes, this census information regarding residential building permits sheds light on the Texas landscape for energy code adoption and compliance.

Total State Population in 2010	25,145,561	
Municipal Population	18,506,825	74% of total population
Unincorporated Population	6,638,736	26% of total population
Largest 217 Municipals (those over 10,000 in population)	16,433,624	88% of Muni's population


Distribution of Residential Building Permits

There were a total of 78,810 new single family home starts reported by the Census Bureau in 2012. Over one-third of the building market exists in the unincorporated areas of the state.

Total Permits for new single family home starts in 2012	78,810	
Permits in Largest 217 Municipals (over 10,000 in population)	47,752	60% of total
Permits in 995 Smaller Municipals	4,376	5% of total
Permits in Unincorporated Areas	26,682	35% of total

New home permits are reported by jurisdictions that have the authority to adopt and enforce building codes and in some unincorporated areas that do not have the authority to enforce any building code, including energy codes. In some areas the permits are based on fire code or subdivision codes, which do not address building codes at all. All building starts are continuing to increase in Texas, and because we have the highest number of single family home starts of any state—by a large margin—any improvement in compliance with energy codes will have a very significant impact.

⁴ http://co.jefferson.tx.us/env_cntrl/Documents/HB2833FactSheet-Final.pdf



IV. Above-Code Programs

Energy Star certified new homes meet code compliance as an alternative to the state energy code, according to Texas state law. Texas reported 21,001 Energy Star certified new homes in 2012, which was down from the previous year. The Energy Star standards continue to become more stringent as Energy Star seeks to stay ahead of energy code. As higher codes have been adopted by the state and the local jurisdictions, we continue to see the number of Energy Star home certifications drop.

There are a variety of other “above-code” programs that encourage builders to enhance their buildings to offer additional energy savings, water savings, and the use of green building materials and practices. Build San Antonio Green, Austin Energy Green Building, Environments for Living, and Green Built Texas are the largest regional programs. While these programs vary in their requirements and energy performance, they certainly provide builders with the opportunity to obtain experience with advanced building products or practices, ahead of mandated codes.


We know that a significant number of builders offer these higher efficiency homes, but at this time it is difficult to accurately calculate the impact on the local jurisdictions when determining the compliance levels with the state code due to: (1) lack of reporting by the jurisdiction, (2) double counting by city permitting and the above-code programs, or (3) double-counting by receiving multiple above-code certifications for the same building.

V. Local Adoption

Last year at this time, we found 20 cities in Texas which had adopted the 2012 IECC Energy Codes, or adopting significantly stronger amendments on a voluntary basis. Many of the local jurisdictions amend these newer codes or develop ways to move the market more gradually, through delayed enforcement or allowing some additional trade-offs. This number of local jurisdictions who require and encourage higher levels of energy efficiency in buildings has grown every year, and we have currently identified 64 cities which have opted for more stringent energy codes, representing almost 5.5 million in population.

We have not studied, recorded, or attempted to analyze the various amendments to the energy code that exist in local jurisdictions, but there are a wide variety of amendments which create a patchwork of practices across the state. This creates a challenge for all those in the building trades, and for training these same professionals to meet these various standards.

Due to Texas operating under “home rule”, or the requirement for each local jurisdiction to implement and enforce building codes, there is also a significant delay or lag-time between state adoption and local adoption of energy codes. Builders are obligated to meet the state-mandated minimum practice when the state establishes a new code, but it takes jurisdictions years to put these practices into their local ordinances and to bring their enforcement practices up to this standard. This presents a significant challenge for builders working with local code officials who are enforcing



different standards within a metro-area. The industry supports the “leveling of the field” and broad adoption and enforcement of the current state energy code (2009) would be preferred by builders.

The consumer or home buyer is unaware of this variety of standards and is not receiving the same assurance of quality and value. Supporting increased adoption and enforcement of energy codes will greatly increase efficiency in new buildings, lowering a homeowner’s energy costs significantly enough to pay for any additional investment in a few years and reap the benefits of the savings for the life of the building. Both residential and commercial buildings can significantly reduce the peak demand for power, which reduces energy costs to the entire state, and reduces the need for additional power plants to be built.

VI. Current Code Adoption

SPEER has researched and documented the current residential code that is being enforced in the 217 largest cities, but we chose not to differentiate between the IRC and the IECC, and did not evaluate amendments to determine whether they are more or less stringent than the published code.


We now report that:

- 57 large Texas cities have adopted 2012 energy codes or significantly amended local versions that are very close to 2012 IECC (+7 smaller cities);
- 108 Texas cities are enforcing 2009 Energy Codes; and
- 52 are still using older codes.

This represents significant improvement in the past year, since we began this outreach. We can report that:

- 28% of the largest cities have adopted higher codes in the past year; some just meeting the state requirement and some going beyond voluntarily.
- Cities with codes below the state minimum codes (older than 2009) went from 45% to 24% of the largest 217 cities.
- Voluntary adoption of above-state code amendments or 2012 IECC codes has risen from 8% to 26% of the largest cities.
- At least 17 more cities identified that they are currently in the process of raising their energy codes.

We have provided a list of the 217 largest Texas cities, their 2010 population, their 2012 permit numbers, and their current energy code (Appendix A). We have also identified those that are located in a non-attainment or near non-attainment area of the state, which roughly correlates with the population centers of the state, and where the impact of these energy savings have additional value. The map provided (Appendix B) demonstrates the distribution of the code adoptions in these largest cities in Texas. Links to these cities, their building code enforcement departments, and their ordinances will be made available on the SECO website.



VII. Reporting Adopted Codes

The Texas Health and Safety Code, Section 388.003 (c)(3) requires a municipality to track and report to the State Energy Conservation Office (SECO) on implementation of the codes.

While this is in law, there has never been a complete list or compilation of this information, which is a constantly moving target. We have now provided SECO with the links to the building department for each city's website and the location of ordinances for each of the 217 largest cities, or those with more than 10,000 in population. This will enable the building and design industries quicker access to this information and we encourage these cities, and others, to help to keep this information up to date.

VIII. Code Enforcement

The Texas Health and Safety Code, Section 388.003 (c)(2) requires a municipality to ensure that code-certified inspectors shall perform inspections and enforce the code.


We surveyed building code officials or inspectors in the 217 largest cities in 2013, and these surveys reported that just over half of the jurisdictions require certification of their enforcement staff. Below is the information ICC provided, which shows how many Texas individuals are certified at this time, and demonstrates there is ample room for improvement in this area.

ICC Certifications in Energy Codes	877 individuals*
Certified Residential Inspectors and Plan Examiners	765
Certified Commercial Inspectors	411
Certified Commercial Plan Examiners	195
Certified Energy Code Specialists	9
Certified Energy Code Ambassadors	13

*more than one certification may be held by individuals.

To support enforcement professionals, we encourage the local jurisdictions to write the required certification into the job qualifications and then provide the continuing education so that their staff can keep up with the changes in energy codes and building science. The enforcement professionals training and awareness of the energy code is a critical step toward statewide compliance.

ICC provides certification and training to these industry professionals through their Building Professional Institute (BPI) courses, or through online courses and certification testing. The BPI was originally established at the University of Texas at Arlington (UTA) in 1992 by the Building Officials Association of Texas (BOAT) and the Construction Research Center (CRC) at UTA. The BPI offers a week-long program of quality education and training for building professionals including Builders, Building Officials, Contractors, Municipal Inspectors, Real Estate Inspectors, Architects, Engineers, Plumbers, Fire Protection Personnel, Code Enforcement, Permit Technicians, Electricians, and Environmental Health and Safety Personnel. Many of these professionals need



areas certifications and approved continuing education to maintain their licensing and expertise. These courses are offered in four Texas locations each year.

Through our survey of building code officials we identified that there is consensus that the permit offices and staff need to be better supported to take on this important enforcement role. Not unlike the fire department, their enforcement can help to prevent house fires and plumbing leaks that are life threatening and expensive to repair. However they report that they are typically:

- Short on time and/or staff to complete adequate inspections.
- There is a need for education or training, but only half reported that the certification was required for the job, and it is difficult to get time or funding to go to training.
- Salary levels make it difficult to fill the positions as they become available.

In this survey, building code officials also suggested that these barriers to code enforcement are similar within all the building trades. In the summer months when building industry is at its peak, there is little time to do adequate training, so they rely on the building inspectors to check their contractors' work, or to let them know if there is an issue in the plan review. This requires the building inspectors and plan reviewers to spend even more time working to educate and inform builders and contractors regarding standards and codes.

Texas allows third-party or private sector participation in the enforcement of building codes, which may be a cost-effective option to either increase capacity of the city's staff for one or all of the inspections. Cities will typically have the plan review and field inspection as part of the same program, to ensure that the building conforms to the plan. Larger cities may develop or approve a qualified pool of inspectors that the builder may choose from, or assign an inspector on a rotational basis. Further, the city should also monitor and verify inspector conformance by conducting random performance audits of inspectors. This would include choosing a sample of properties and then review plans, conduct field inspections of sample properties and conduct its own performance testing. Third-party inspectors who are engaged in the enforcement of energy codes are also required to have ICC Certification. Home Energy Raters, who can provide performance testing and verification to support Energy Star Certification or code compliance, also provide valuable information for homeowners, buyers and builders to assist in improving the energy efficiency of homes⁵.

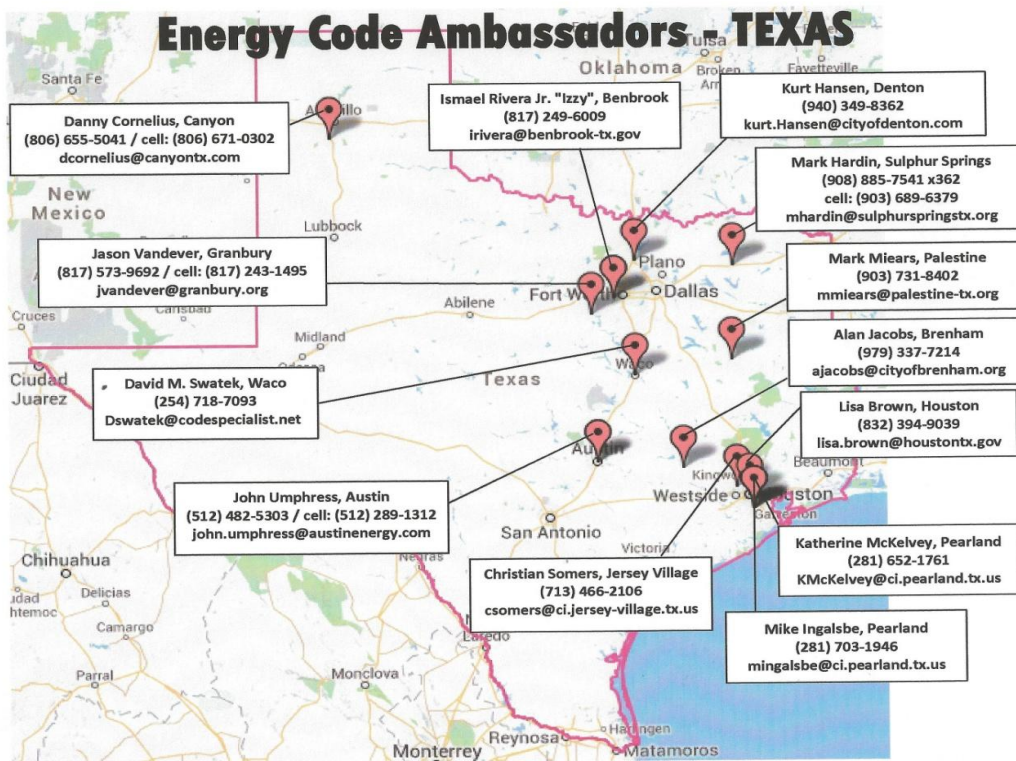
IX. SPEER Engagement with the Building Industry

SPEER is specifically interested in closing the gap in local adoption and compliance through increased awareness and education. We plan to respond to the state's need for local compliance training, and to create programs to increase awareness and acceptance of energy codes and the value they bring. The TECCC was initiated to help to identify ways for the industry to be self propelled to

⁵ <http://www.txhero.org/>

improve compliance. Our goal is to develop a network of information and resources that is available to all building industry partners, to allow for collaborative efforts to increase compliance in every jurisdiction.

SPEER launched an Energy Code Ambassadors Program in 2013, partnering with the International Code Council (ICC), the Building Code Assistance Project (BCAP), the Building Officials Association of Texas (BOAT), and the State Energy Conservation Office (SECO). Through this program SPEER is able to have “boots on the ground” in various areas of the state, who have been provided advanced energy code training and have years of experience in the building trades. They offer local assistance to peers in the industry, organize speakers for local educational programs, or offer resources to other builders, contractors, raters or code officials in their area. This peer to peer engagement across building trades is especially helpful in reaching the large numbers of people working in a vast geographic area. These Ambassadors will be provided with curriculum for training local groups, and other resources, and will be supported by SPEER staff. SPEER has obtained funding to double this team in 2014 and is recruiting applicants⁶, which may include raters, builders or code officials.



⁶ www.eepartnership.org/ambassadorprogram

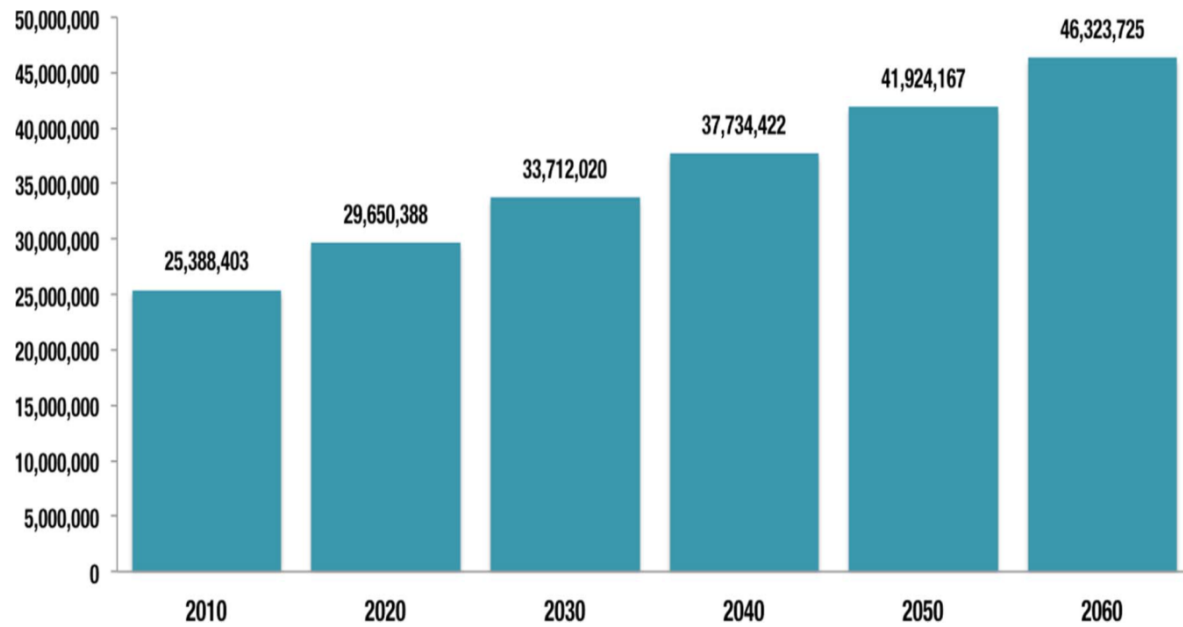


Local working groups that offer educational resources exist in some areas of the state, but not in others. SPEER will utilize local groups such as the local Builders Association, AIA, USGBC or ICC Chapters whenever possible to provide training to encourage compliance and raise awareness. SPEER is developing training resources designed to deliver the same message to all building and design trades. By providing this consistent information and making it readily available online, we believe that it will reduce misinformation, which will also reduce re-inspection and costly time on appeals.

SPEER is also developing an online speaker’s bureau or resource catalogue that will provide Ambassadors or local groups to access topical and specific presentations on energy codes and associated building practices to “meet compliance”. This partnership between industry and building professionals is especially important as we move to more stringent codes and introduce new materials and technology. SPEER will facilitate the delivery of these trainings, which may be provided in person or through local, interactive webinars; or may link to other available resources such as the video training on the 2009 energy codes which is available on-line for free on the SECO website⁷.

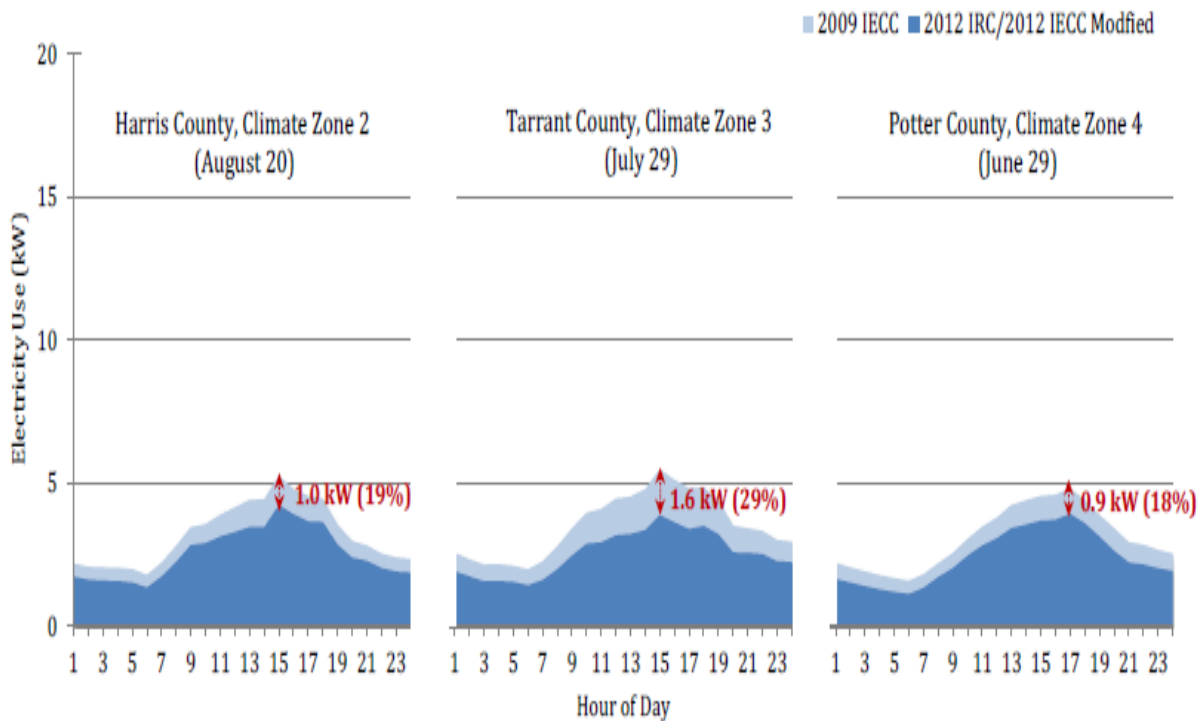
X. Statewide Compliance Incentives

With the Texas population expected to continue to grow, there is an expanding opportunity to increase energy productivity – or use our energy more wisely – and continue to reap the benefits for years to come. Reducing energy consumption in our homes and businesses contributes to improving our air quality, keeping power costs low, and improving the business environment.



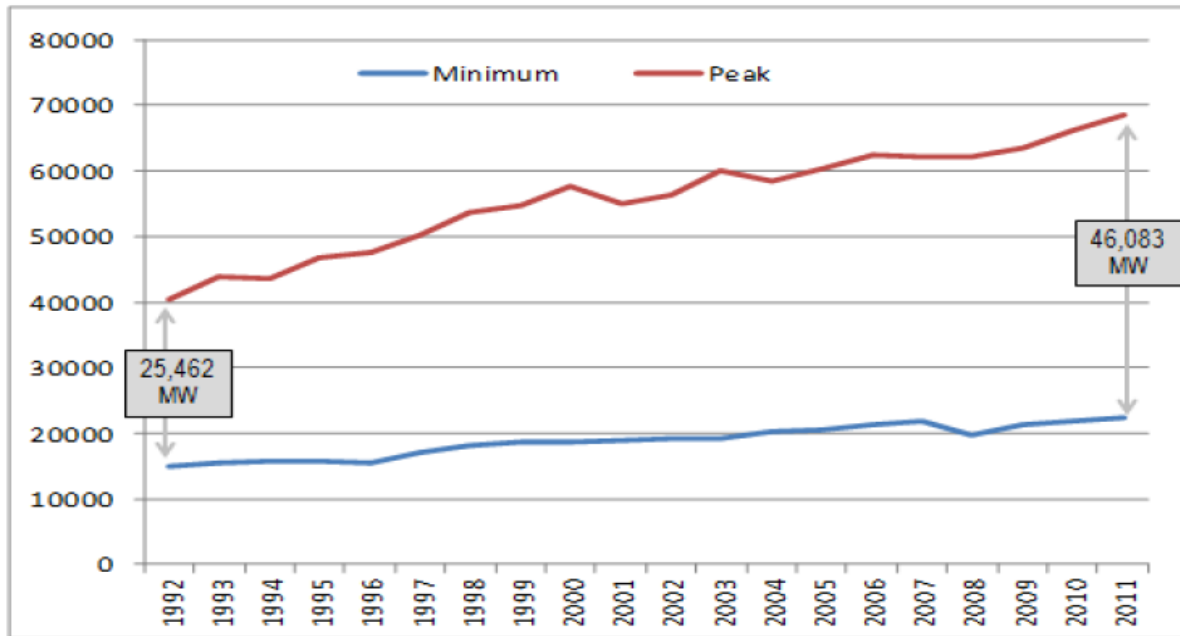
⁷ www.seco.cpa.state.tx.us/tbec/videos.php

Energy efficiency in buildings has a significant impact on the amount of energy used during the peak hours of the summer, generally based on air conditioning load. As the population grows, the need for more energy or “resource adequacy”, is primarily a problem at peak, that is, the electric grid is most strained on very hot and very cold days. Given the high number of very hot days in Texas, many of the requirements of energy code have an even bigger impact here than other places. For instance, window and insulation requirements, when installed properly and enforced by code officials, ensure that peak demand will be significantly lower than in a house or building without those requirements. Texas A&M’s Energy Systems Lab found 18-29% peak reductions when comparing 2012 IECC to the 2009 code.



To the extent the peak hours can be reduced through energy efficiency, this can reduce the need for either additional power supply or for the purchase of the very most expensive kWh, thereby keeping the overall costs lower for all consumers and businesses.

As further demonstrated below, the difference in the ERCOT system demand ranges from 26 GW to 46 GW more electricity needed on any given day, at the highest electric use hours of the day. This peak in demand is obviously the highest on the hottest afternoons of the summer in Texas.




Annual system peak hours vs. lowest load hours

XI. Local Jurisdiction Incentives

Insurance Services Office (ISO) reviews city practices so that they can develop an insurance classification rating that reflects the safety and durability of the buildings, in the event of flood or other natural disaster. This rating is based on having certified inspectors, regular training, adequate staffing to handle their local building demand, and the adoption and enforcement of current building codes, including energy codes. If the building code adopted by a city is more than five years older than the latest edition published, they will begin to lose points in their score, increasing as time goes on. This means that cities who have adopted the 2009 edition of national building codes will begin to lose points next year, if they do not adopt the 2012 building code. Conversely, cities that adopt and enforce the latest un-amended edition of the national building code within one year of publication are awarded the maximum number of points in that category.

And what are the consequences of this classification rating by ISO? The ratings are a leading source of information to the insurance industry and to the Federal Emergency Management Agency (FEMA). Higher classification ratings are consistent with safer buildings, less damage, and lower insured losses from catastrophe. Correspondingly, these city governments and its residents will benefit from lower casualty and property insurance rates. Additionally, if a disaster does strike, FEMA's recovery funding will, at least in part, depend upon that classification rating. Therefore, these insurance premium savings provide yet another incentive for cities to adopt and enforce the most recent published building codes, including energy codes.

In addition, we found ResCheck and ComCheck continue to be the most popular tools for builders to use in meeting compliance. DOE has announced that they will not be continuing to support



more than three (3) versions of these tools. This means that as soon as the 2015 ResCheck and ComCheck are completed, versions prior to 2009 will not be available. Cities that have not moved to the 2009 energy codes by later this year will no longer be able to rely on these outdated tools. Texas A&M developed the IC3 software, which is available in Texas as an alternative to ResCheck, and also provides emissions savings calculations along with the code compliance data⁸.

XII. Reevaluation

The goal of the TECCC is to continue to meet on a regular basis, to develop initiatives and support programs that will help to improve adoption and compliance with the state energy codes, and to reevaluate these metrics on an annual basis. The TECCC will also report on the number of certified energy code enforcement personnel in the state. This is Texas' plan to determine the improvement in adoption and compliance with the state energy code at this time. The TECCC will develop additional metrics and methods of documentation of code compliance, as we continue to work to advance the energy efficiency and building practices in Texas.

XIII. Conclusion

Texas has adopted a minimum standard for energy code in new buildings and significantly upgraded retrofits, and it is required for incorporated jurisdictions of all sizes to adopt, implement and enforce codes that meet or exceed this minimum. Building and design professionals must see that they meet this minimum standard, whether it is directly enforced by the jurisdiction, or not. Enforcement personnel are required to be ICC certified in energy codes. All building standards are established to assure buildings are safe, durable, affordable and comfortable for the owners and occupants of these buildings. Energy codes are no different.

This report documents significant improvement during the past year in the adoption of the state energy code and in the voluntary move toward a more stringent code. This progress directly results in more efficient and affordable buildings that will continue to benefit the residents of Texas for decades to come. The Texas Energy Code Compliance Collaborative has been able to identify a number of opportunities to support the continued improvement in building practices. This network of stakeholders, along with SPEER's expanding outreach and education, will provide the necessary framework for continued impacts in the largest building market in the country.

⁸ <http://ic3.tamu.edu/>

Texas Jurisdictions Above 10,000 in Population	Non-Attainment or Near Non-Attainment Areas	2010 Pop	2012 Single Family Residential Permits	July 2014 - Residential Energy Code
Abilene		117,063	233	2012
Addison	DFW	13,056	1	2009
Alamo		18,353	49	2000
Alice*		19,104	32	2003
Allen	DFW	84,246	480	2009
Alton		12,341	61	2012
Alvin	NNA	24,236	51	2009
Amarillo		190,695	593	2012
Andrews		11,008	54	2009
Angleton	HGB	18,862	16	2000
Arlington	DFW	365,438	456	2009
Athens	NNA	12,710	8	2012
Austin	NNA	790,390	2,539	2012
Azle	DFW	10,947	14	2012
Balch Springs	DFW	23,728	60	2003
Bay City		17,614	9	2009
Baytown	HGB	71,802	116	2009
Beaumont	BPA	118,296	212	2009
Bedford	DFW	46,979	24	2009
Beeville		12,863	9	2009
Bellaire	HGB	16,855	133	2012
Belton*		18,216	124	2003
Benbrook	DFW	21,234	54	2012
Big Spring		27,282	15	2012
Boerne		10,471	162	2006
Bonham		10,127	8	2012
Borger		13,251	-	2006
Brenham*		15,716	35	2009
Brownsville		175,023	570	2009
Brownwood		19,288	14	2009
Bryan		76,201	172	2009
Burkburnett		10,811	5	2012
Burleson	DFW	36,690	287	2009
Canyon		13,303	53	2012
Carrollton	DFW	119,097	202	2012
Cedar Hill	DFW	45,028	63	2009
Cedar Park	NNA	48,937	668	2012
Cibolo	NNA	15,349	390	2012
Cleburne	DFW	29,337	17	2009
Clute	HGB	11,211	8	2009
College Station		93,857	555	2012
Colleyville	DFW	22,807	138	2009
Conroe	HGB	56,207	352	2009
Converse	NNA	18,198	139	2009
Coppell	DFW	38,659	87	2009

Texas Jurisdictions Above 10,000 in Population - Cont.	Non-Attainment or Near Non-Attainment Areas	2010 Pop	2012 Single Family Residential Permits	July 2014 - Residential Energy Code
Copperas Cove		32,032	148	2009
Corinth	DFW	19,935	15	2009
Corpus Christi	NNA	305,215	931	2009
Corsicana		23,770	16	2009
Crowley	DFW	12,838	162	2006
Dallas	DFW	1,197,816	936	2009
Deer Park	HGB	32,010	53	2012
Del Rio		35,591	29	2006
Denison		22,682	8	2012
Denton	DFW	113,383	300	2012
DeSoto	DFW	49,047	129	2009
Dickinson	HGB	18,680	55	2009
Donna*		15,798	49	2012
Dumas*		14,691	4	2006
Duncanville	DFW	38,524	25	2009
Eagle Pass		26,248	75	2012
Edinburg		77,100	362	2009
El Campo		11,602	10	2009
El Paso	EP	649,121	2,815	2009
Ennis	DFW	18,513	8	2009
Eules	DFW	51,277	41	2009
Farmers Branch	DFW	28,616	49	2012
Flower Mound	DFW	64,669	145	2009
Forest Hill	DFW	12,355	4	2006
Forney	DFW	14,661	178	2009
Fort Worth	DFW	741,206	2,716	2009
Fredricksburg		10,530	34	2009
Freeport	HGB	12,049	5	2009
Friendswood	HGB	35,805	192	2009
Frisco	DFW	116,989	1,578	2012
Gainesville		16,002	25	2009
Galena Park	HGB	10,887	2	2009
Galveston	HGB	47,743	185	2009
Garland	DFW	226,876	158	2009
Gatesville		15,751	58	2012
Georgetown*	NNA	47,400	691	2000
Glenn Heights	DFW	11,278	27	2009
Grand Prairie	DFW	175,396	351	2009
Grapevine	DFW	46,334		2009
Greenville	NNA	25,557	9	2006
Groves	BPA	16,144	13	2000
Haltom City	DFW	42,409	5	2003
Harker Heights		26,700	204	2009
Harlingen		64,849	84	2012
Henderson	NNA	13,712	4	2012

Texas Jurisdictions Above 10,000 in Population - Cont.	Non-Attainment or Near Non-Attainment Areas	2010 Pop	2012 Single Family Residential Permits	July 2014 - Residential Energy Code
Hewitt		13,549	39	2012
Hidalgo		11,198	54	2006
Highland Village	DFW	15,056	29	2009
Horizon City	EP	16,735	153	2009
Houston	HGB	2,099,451	3,513	2009 + 15%
Humble	HGB	15,133	7	2012
Huntsville		38,548	47	2009
Hurst	DFW	37,337	22	2009
Hutto	NNA	15,404	268	2009
Irving	DFW	216,290	455	2009
Jacinto City	HGB	10,553	-	2009
Jacksonville		14,544	15	2006
Katy	HGB	14,102	77	2012
Keller	DFW	39,627	241	2009
Kerrville		22,347	43	2006
Kilgore*	NNA	12,975	12	2006
Killeen		127,921	995	2009
Kingsville		26,213	19	2009
Kyle	NNA	28,016	244	2009
La Marque City	HGB	14,509	77	2003
La Porte	HGB	33,800	45	2012
Lake Jackson	HGB	26,849	16	2006
Lakeway	NNA	11,391	196	2009
Lancaster	DFW	36,361	72	2012
Laredo		236,091	750	2009
League City	HGB	83,560	696	2009
Leander	NNA	26,521	420	2009
Leon Valley	NNA	10,151	10	2006
Levelland		13,542	6	2009
Lewisville	DFW	95,290	168	2012
Little Elm	DFW	25,898	470	2009
Live Oak		13,131	156	2012
Lockhart	NNA	12,698	2	2009
Longview	NNA	80,455	198	2009
Lubbock		229,573	697	2009
Lufkin		35,067	50	2006
Lumberton	BPA	11,943	59	2009
Mansfield	DFW	56,368	193	2009
Marshall	NNA	23,523	26	2009
McAllen		129,877	433	2009
McKinney	DFW	131,117	1,490	2012
Mercedes		15,570	31	2012
Mesquite	DFW	139,824	33	2009
Midland		111,147	599	2009
Midlothian	DFW	18,037	185	2009

Texas Jurisdictions Above 10,000 in Population - Cont.	Non-Attainment or Near Non-Attainment Areas	2010 Pop	2012 Single Family Residential Permits	July 2014 - Residential Energy Code
Mineral Wells	DFW	16,788	9	2012
Mission		77,058	249	2009
Missouri City*	HGB	67,358	205	2006
Mount Pleasant		15,564	13	2012
Murphy	DFW	17,708	141	2006
Nacogdoches		32,996	38	2009
Nederland	BPA	17,547	69	2000
New Braunfels	NNA	57,740	612	2009
North Richland Hills	DFW	63,343	185	2009
Odessa		99,940	581	2006
Orange	BPA	18,595	17	2003
Palestine*		18,712	3	2003
Pampa		17,994	2	2003
Paris		25,171	-	2006
Pasadena	HGB	149,043	53	2006
Pearland	HGB	91,252	948	2009
Pflugerville	NNA	46,936	264	2012
Pharr		70,400	187	2012
Plainview		22,194	1	2009
Plano	DFW	259,841	673	2012
Port Arthur	BPA	53,818	170	2012
Port Lavaca		12,248	6	2012
Port Neches	BPA	13,040	9	2000
Portland	NNA	15,099	83	2006
Raymondville*		11,284	11	2006
Red Oak	DFW	10,769	56	2012
Richardson	DFW	99,223	431	2012
Richmond	HGB	11,679	23	2006
Rio Grande City		13,834	-	2006
Robinson		10,509	76	2012
Robstown*	NNA	11,487	11	2009
Rockwall	DFW	37,490	239	2009
Rosenberg	HGB	30,618	155	2009
Round Rock	NNA	99,887	259	2012
Rowlett	DFW	56,199	89	2012
Sachse	DFW	20,329	151	2009
Saginaw	DFW	19,806	89	2012
San Angelo		93,200	229	2009
San Antonio	NNA	1,327,407	1,896	2009
San Benito		24,250	37	2006
San Juan		33,856	128	2009
San Marcos	NNA	44,894	192	2009
Santa Fe*	HGB	12,222	37	2006
Schertz*	NNA	31,465	265	2006
Seabrook	HGB	11,952	76	2009

Texas Jurisdictions Above 10,000 in Population - Cont.	Non-Attainment or Near Non-Attainment Areas	2010 Pop	2012 Single Family Residential Permits	July 2014 - Residential Energy Code
Seagoville*	DFW	14,835	37	2006
Seguin	NNA	25,175	75	2009
Sherman		38,521	48	2009
Snyder		11,202	51	2003
Socorro	EP	32,013	140	2009
South Houston	HGB	16,983	13	2006
Southlake	DFW	26,575	110	2009
Stafford	HGB	17,693	3	2009
Stephenville		17,123	46	2006
Sugar Land	HGB	78,817	395	2009
Sulphur Springs		15,449	9	2012
Sweetwater		10,906	1	2012
Taylor	NNA	15,191	21	2009
Temple		66,102	469	2009
Terrell	DFW	15,816	15	2003
Texarkana		36,411	47	2003
Texas City	HGB	45,099	103	2006
The Colony	DFW	36,328	99	2012
Tomball	HGB	10,753	28	2009
Tyler	NNA	96,900	134	2009
Universal City	NNA	18,530	5	2012
University Park	DFW	23,068	77	2009
Uvalde		15,751	21	2009
Vernon*		11,002	-	2009
Victoria	NNA	62,592	111	2009
Vidor	BPA	10,579	10	2009
Waco		124,805	323	2012
Watauga	DFW	23,497	1	2000
Waxahachie*	DFW	29,621	195	2006
Weatherford		25,250	121	2009
Webster*	HGB	10,400	47	2006
Weslaco		35,670	113	2006
West University Place	HGB	14,787	41	2012
White Settlement	DFW	16,116	29	2012
Wichita Falls		104,553	105	2006
Wylie	DFW	41,427	240	2009

LEGEND:

57 Large cities have adopted 2012 IECC or significantly higher energy codes.

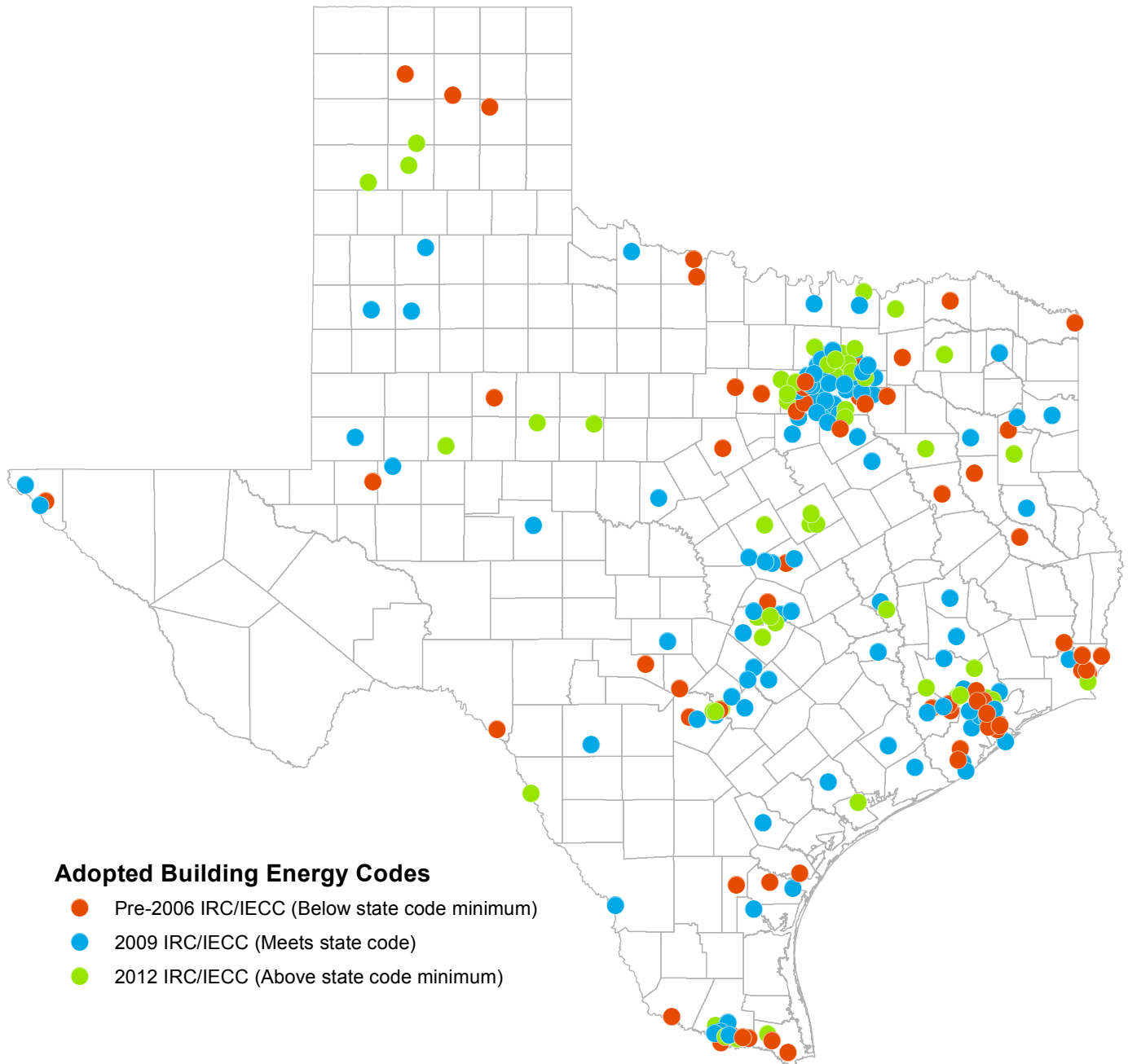
108 Large cities have adopted 2009 IRC or IECC in compliance with State Law.

52 Large cities have not yet adopted 2009 energy codes.

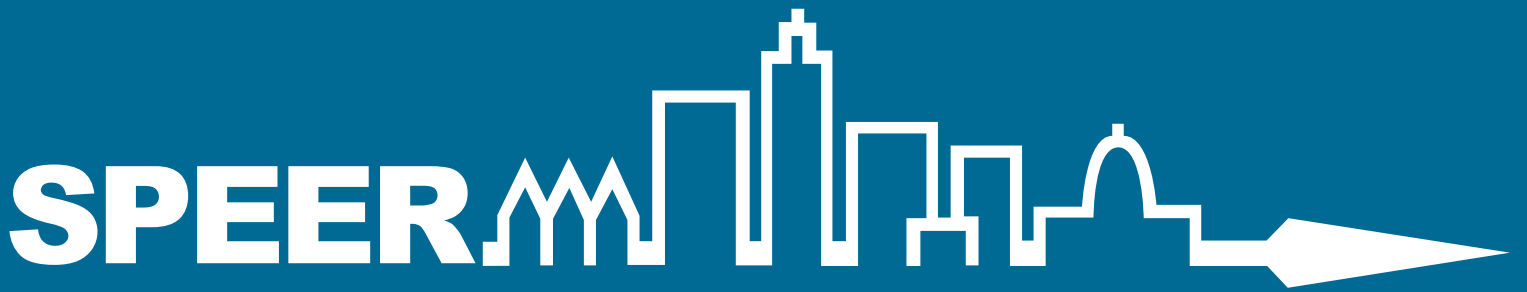
* 17 Cities that plan to adopt a newer code in 2014.

Residential Building Energy Code Adoption Status

August 2014



Disclaimer: This represents the currently adopted energy code in the Texas cities over 10,000 in population. Local amendments may have been adopted and have not been reviewed at this time to determine whether they are more or less stringent than the published codes. Please see local ordinances for this detail.



The South-central Partnership for Energy Efficiency as a Resource

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