

# **Senate Government Organization Committee**

**Interim Report to the  
81st Legislature**



**December 2008**

**Senate Committee on Government Organization  
Interim Report to the 81st Legislature**

SENATOR RODNEY ELLIS  
Chair



**The Texas Senate**  
**Government Organization Committee**

Senator Glenn Hegar  
Vice Chair  
Senator Kim Brimer  
Senator Mario Gallegos  
Senator Mike Jackson  
Senator Jane Nelson  
Senator John Whitmire

December 1, 2008

The Honorable David Dewhurst  
Lt. Governor  
P.O. Box 12068  
Austin, Texas 78711

The Senate Committee on Government Organization submits its interim report for consideration by the 81st Texas Legislature.

Respectfully submitted,

Handwritten signature of Rodney Ellis in black ink.

Senator Rodney Ellis, Chairman

Handwritten signature of Glenn Hegar in black ink.

Senator Glenn Hegar

Handwritten signature of Jane Nelson in black ink.

Senator Jane Nelson

Handwritten signature of Mario Gallegos in black ink.

Senator Mario Gallegos

Handwritten signature of Mike Jackson in black ink.

Senator Mike Jackson

Handwritten signature of Kim Brimer in black ink.  

Senator Kim Brimer

Handwritten signature of John Whitmire in black ink.

Senator John Whitmire



## **Acknowledgements**

The Senate Committee on Government Organization and the Committee Chairman would like to recognize everyone who assisted with this report for their hard work and cooperation.

The Committee Chairman would also like to acknowledge the valuable assistance and expertise of everyone who took the time to testify, submit written reports, or otherwise assist in the interim study.

The Committee Chairman extends a special thanks to the Government Organization staff for their hard work in developing this report.

## Table of Contents

**Interim Charges .....4**

### **Report and Recommendations**

Study the function, structure, funding and operations of the State Energy Conservation Office (SECO). Identify opportunities to maximize the impact and further the mission of SECO, and support SECO's role in achieving energy efficiency reporting requirements and targets established through legislation.....**6**

Examine criminal background check requirements across Texas health and human service, law enforcement, and education agencies, as well as other licensed professionals. Determine best practices, develop cross-agency standards, and make recommendations for reducing costs and streamlining the process.....**12**

Study the economic and security costs and benefits, both short-term and long-term, of adoption of an open document format for state-created documents.....**31**

Study whether Texas should adopt high performance building standards. In light of the potential impact of Texas' population growth on the need for electricity and water, study whether high performance buildings can cost-effectively lower utility costs and make more efficient use of natural resources.....**36**

Study options for developing a new master-planned campus to serve the needs of state government and provide for future growth. Consider locations accessible to the government center, as well as relative property values and lease rates. Consider divestiture of certain real estate assets within Travis County to take advantage of favorable market conditions and the cost and benefits of reducing reliance on leased facilities. Coordinate activities with the Texas Facility Commission and the General Land Office.....**43**

**Appendix A**      Texas Department of Licensing and Regulation Presentation to the Senate Committee on Government Organization

**Appendix B**      Executive Summary from McKinsey & Co., *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?*

## **Interim Charges**

- Study the function, structure, funding and operations of the State Energy Conservation Office (SECO). Identify opportunities to maximize the impact and further the mission of SECO, and support SECO's role in achieving energy efficiency reporting requirements and targets established through legislation.
- Examine criminal background check requirements across Texas health and human service, law enforcement, and education agencies, as well as other licensed professionals. Determine best practices, develop cross-agency standards, and make recommendations for reducing costs and streamlining the process.
- Study the economic and security costs and benefits, both short-term and long-term, of adoption of an open document format for state-created documents.
- Study whether Texas should adopt high performance building standards. In light of the potential impact of Texas' population growth on the need for electricity and water, study whether high performance buildings can cost-effectively lower utility costs and make more efficient use of natural resources.
- Study options for developing a new master-planned campus to serve the needs of state government and provide for future growth. Consider locations accessible to the government center, as well as relative property values and lease rates. Consider divestiture of certain real estate assets within Travis County to take advantage of favorable market conditions and the cost and benefits of reducing reliance on leased facilities. Coordinate activities with the Texas Facility Commission and the General Land Office.
- Monitor the implementation of legislation addressed by the Government Organization Committee, 80th Legislature, Regular Session, and make recommendations for any legislation needed to improve, enhance, and/or complete implementation.

**Senate Committee on Government Organization Interim Hearings**

<i>Date</i>	<i>Location</i>	<i>Charge</i>
April 24, 2008	Betty King Committee Room Room 2E.20 Austin, Texas	Charge related to high performance building standards
September 23, 2008	Betty King Committee Room Room 2E.20 Austin, Texas	Charge related to the State Energy and Conservation Office  Charge related to high performance building standards
October 27, 2008	Betty King Committee Room Room 2E.20 Austin, Texas	Charge related to criminal background checks  Charge related to open document formats  Charge related to the implementation of legislation passed in the 80th session  Charge related to a study of the master planned campus

## **Interim Charge on State Energy Conservation Office**

### **Charge**

Study the function, structure, funding and operations of the State Energy Conservation Office (SECO). Identify opportunities to maximize the impact and further the mission of SECO, and support SECO's role in achieving energy efficiency reporting requirements and targets established through legislation.

### **Background**

SECO saves millions of dollars in taxpayer money and could save even more. At a time when the state budget will be strained, SECO has a real opportunity to save taxpayers hundreds of millions of dollars within a single biennium. As of November 2007, the Texas LoanSTAR (Saving Taxes and Resources) Program alone had saved Texas taxpayers \$212 million through energy efficiency projects—and LoanSTAR is just one of many SECO-administered programs.<sup>1</sup>

SECO has established itself as the go-to agency for all public entities looking to decrease electric bills by using energy more efficiently. It has successful programs for schools and local governments, as well as state agencies and universities.

### **Discussion**

SECO has thrived within the Comptroller of Public Account's office and is well run under current management. SECO's strengths include its financing capacity through the LoanSTAR program and its tremendous success in leveraging state funds. For every \$1 in state funds, SECO has drawn down over \$9 in federal funds and saved taxpayers over \$50 in energy and water savings (see chart on next page).

#### Financing

SECO's self-sustaining LoanSTAR program saves taxpayers' money and reduces statewide energy demand. By providing low-interest loans from a revolving loan fund to finance energy efficient retrofits in state facilities, the program has reduced governmental energy costs by \$200 million. The LoanSTAR program remains a popular and effective resource for assisting state and municipal facilities in making energy-efficient investments. Roughly 200 facilities have received LoanSTAR funding to date, resulting in an energy savings average of 15 percent.<sup>2</sup> Examples include the Holliday Independent School District, whose LoanSTAR-funded lighting and HVAC retrofits will save roughly \$20,000 in annual energy costs, and the Arlington Independent School District, whose lighting and power system upgrades save roughly \$650,000 per year.

SECO's LoanSTAR program should be enhanced with more funding, wider accessibility, and more convenient financing mechanisms. The American Council for an Energy-



Efficient Economy (ACEEE) recommends expanding LoanSTAR's revolving fund from \$95 million to \$300 million, supported through loan repayments and lower energy costs over time, to ensure half of all eligible facilities receive assistance over the next 15 years.<sup>3</sup>

SECO does not promote the LoanSTAR program because there is currently no need to do so. The program is oversubscribed with a waiting list of over \$30 million in projects (for the \$98 million fund). An increase in the amount of the fund, depending on the size of the increase, should include money to promote the program. At the very least, the Legislature should increase the size of the fund so that all wait-listed projects may be funded. At best, if the Legislature triples the size of the fund and requires SECO to aggressively market the fund, the result would be larger taxpayer savings at every level of government.

Fiscal responsibility

Between 2000-06, SECO leveraged roughly \$2.8 million in state money to draw down roughly \$25 million in federal funds toward energy efficiency programs that saved state agencies over \$100 million in energy costs.

<b>State Fiscal Year</b>	<b>State General Revenue \$</b>	<b>Leveraged Federal Funds (mostly Dept. of Energy grants)</b>	<b>LoanSTAR – Public Sector \$ Saved</b>
2000	\$230,400	\$2,645,074	\$12,110,000
2001	\$230,400	\$2,841,623	\$12,910,000
2002	\$372,800	\$2,277,200	\$13,570,000
2003	\$372,800	\$4,340,250	\$14,940,000
2004	\$530,600	\$4,861,500	\$15,730,000
2005	\$530,600	\$3,892,732	\$17,231,000
2006	\$522,200	\$4,097,545	\$20,665,593
<b>TOTALS</b>	<b>\$2,789,200</b>	<b>\$24,955,924</b>	<b>\$107,156,593</b>

*Source: Texas Comptroller of Public Accounts*

Based on SECO's consistent track record of successfully leveraging federal funds and producing state and local government savings, an increased state appropriation for SECO is recommended.

Outreach and collaboration

In fulfilling its mission to assist and educate businesses, local governments, and schools with energy efficiency, SECO conducts numerous workshops and training sessions in addition to providing online resources. Examples include InfinitePower.com, which spreads public awareness about renewable energy resources and services; a training video funded through a U.S. Department of Energy Special Projects Grant that educates viewers on residential energy code and building science; energy savings training for underserved *colonias* communities; a pollution mitigation program; and free energy efficiency workshops for public facilities.<sup>4</sup> SECO also leads the Texas Energy Partnership

(TEP), which provides counties and cities with information and expertise to improve strategies and resource allocation. SECO's K-12 education programs are widely used in Texas' public and private schools. Over 2000 teachers have participated in SECO trainings that focus on energy usage and effective conservation education strategies.<sup>5</sup>

### Possible Areas for Expansion

#### *Ensuring Texas Gets Credit for Carbon Reductions*

There is little doubt that some sort of price will be attached to carbon in the next few years. There is concern in some quarters that Texas will suffer under any carbon cap-and-trade system, but it is possible that such fears are unfounded.<sup>6</sup>

Texas could quantify carbon dioxide reductions from all of the following:

- Texas has more installed wind generation than any other state (if Texas were a separate country, the state would be fourth in the world). The Electric Reliability Council of Texas (ERCOT) administers the Renewable Energy Credits (RECs) associated with production of renewable power in Texas.
- Texas has a robust energy efficiency portfolio standard, administered by the Public Utility Commission. The PUC will issue a report by the first day of the 81st Legislative Session with a determination on the feasibility of increasing the current goal by 50 percent or 150 percent.
- The Texas Emission Reduction Program (TERP) and Low Income Repair and Assistance Program (LIRAP) are models for other states looking to cut nitrogen oxide (NO<sub>x</sub>) and fine particles 2.5 (PM 2.5) emissions from old vehicles. These programs--particularly TERP, which removes older diesel engines and replaces them with new and vastly cleaner ones--also yield significant reductions of carbon dioxide (CO<sub>2</sub>);
- Texas is in the midst of one of the largest deployments of smart meters in the world, with roughly 5.5 million smart meters scheduled to be installed by 2014.<sup>7</sup>
- The Texas Department of Agriculture runs the biofuels and biomass incentive programs.<sup>8</sup>
- The Texas Railroad Commission runs an alternative-fuel vehicle program, mainly focused on natural gas and propane vehicles, which greatly reduce CO<sub>2</sub> emissions, compared to gasoline or diesel powered ones.
- The Texas Department of Housing and Community Affairs runs the weatherization program with federal Low Income Home Energy Assistance Program (LIHEAP) funds. The state used to -- and could again -- fund weatherization from the System Benefit Fund to assist consumers and lower emissions.
- Policies yet to be enacted could significantly increase Texas' commitment to energy efficiency, pollution reduction, and clean, carbon-free energy. Texas has excellent potential for power from geothermal, biomass, tidal, and solar resources.

It is imperative that Texas start quantifying the carbon dioxide reductions these programs produce. If they can be quantified, they can be monetized, and if they can be monetized, the state stands to gain in a cap-and-trade system. As the list above shows, there are efforts in numerous state agencies. There should be a mechanism for accounting for all of the reductions from these programs. SECO could perform this function.

This is yet another reason why the state should increase funding for SECO. SECO currently has 19 full-time employees but is authorized for 25. A modest increase in appropriations for SECO could yield significant economic benefits for the state.

### *Pollution Mitigation*

Pollution mitigation is another area in which SECO could be increasingly useful to the state of Texas.<sup>9</sup> The Environmental Protection Agency recently lowered the acceptable standard for NO<sub>x</sub> emissions from 84 parts per billion (ppb) to 75 ppb. Whereas, Houston-Galveston, Dallas-Fort Worth, and Beaumont-Port Arthur are in nonattainment; now, Austin, San Antonio, Corpus Christi, Victoria, Tyler-Longview, El Paso, and possibly Waco will also be in nonattainment.

Texas has made substantial progress in lowering NO<sub>x</sub> emissions and yet Houston is still nowhere near attainment even under the old standard. It is hard to imagine a time when Houston will be in attainment under the new standard unless a dramatically different strategy is attempted.

Any successful strategy must include methods to dramatically reduce demand for dirty "peaker plants" on days of high electric use. It is these days -- about 15 or 20 per year on average -- that put us out of attainment and cause significant increases in hospital visits and premature death from exposure to pollution.<sup>10</sup>

EPA recently issued a report that recommended a portfolio of strategies, including energy efficiency, distributed generation, and demand response to reduce pollution on high demand days.<sup>11</sup> All three of these are areas in which SECO has considerable expertise and experience. EPA found that a combination of these three strategies could yield 4-8 percent reductions in only two years and 13-20 percent reductions by 2015. Reductions at these levels would have nearly the entire state in attainment by 2015, with the one exception of Houston. If the upper end of the range could be achieved, even Houston would be in attainment by that date.

SECO should partner with the Texas Facilities Commission (see charge #5) to significantly ramp up demand response, energy efficiency, and distributed generation at state facilities. SECO should also work with state and local government partners, as well as school districts, colleges and universities, to make public buildings a model for these kinds of efforts.

Again, the benefits would be many. There are, of course, the health benefits and the movement toward attainment for our cities, but the state could also quantify carbon dioxide emissions and create a source of revenue for the state under a cap-and-trade system if such a system is ever required. Further, this type of effort is a job creator, too. Energy efficiency retrofits and installations of distributed clean energy systems are jobs that cannot be outsourced.

As the state develops its own policies to dramatically change the way we use power on high demand, high-polluting days, so should efforts be made to change the rest of the state. The Texas Commission on Environmental Quality and PUC should partner with SECO to develop policies that encourage the rapid deployment of enhanced energy efficiency, demand response, and distributed generation of clean energy sources in the private sector, too. Public buildings can lead the way, with SECO providing the expertise to transform the state into an example for others. Private buildings can learn from the state's experience and play a significant role in helping the state reach clean air standards while lowering their electric bills.

#### *Increasing Efficiency in Schools*

Given the resources, SECO could play a larger role in fulfilling objectives outlined in SB 12/HB 3693 of reducing schools' energy usage 5 percent each year through September 1, 2013.<sup>12</sup> SECO's Schools and Local Government Program currently works with public schools, colleges, and universities to help implement energy efficiency upgrades, but a stronger push is needed to help more institutions lower their maintenance and operating costs, as well as utility bills.

Under SB 12/HB 3693, school districts are required to report energy usage to SECO, with a plan to achieve 5 percent reductions. However, there is no enforcement mechanism to compel reporting. There are more than 1000 school districts in Texas and only 19 employees at SECO. This makes the Legislature's statutory goal of 5 percent reductions per year practically unachievable. With more funding from the state, SECO could be more effective in providing assistance to all school districts to ensure they achieve this goal.

#### **Conclusion**

SECO is well run by current management, well placed in the Comptroller's office, and in an excellent position to provide valuable services to the state of Texas, particularly in a carbon constrained world. SECO has an established track record of improving energy efficiency and reducing energy costs and pollution. With a larger appropriation, SECO could draw down additional federal dollars in order to further its mission and maximize its impact.

## Summary of Recommendations

1. SECO's successful LoanSTAR program should be enhanced with more funding and wider accessibility. Currently, there is a long waiting list of public entities awaiting financing. Increased funding would allow wait-listed projects to go forward and allow SECO to aggressively market the program to achieve even more savings for Texas' taxpayers. SECO should continue to fund projects that pay for themselves in energy savings and should give preference to projects that are the most cost-effective.
2. SECO's general operations should also receive an increased appropriation. With additional funds, SECO could more effectively assist public schools, colleges, and universities to meet SB 12/HB 3693's objective of reducing energy usage by 5% per year.
3. The state should consider designating SECO as a clearinghouse for quantifying carbon reductions for all of the state's efforts in energy efficiency, alternative fuels, and renewable energy. If no government agency does this, Texas will likely pay a higher price under a carbon cap-and-trade system than is necessary.
4. SECO's expertise in energy efficiency and distributed generation from clean energy sources positions it well to assist the state in meeting more stringent federal ozone standards issued this year.

## **Interim charge relating to criminal background checks**

### **Charge**

Examine criminal background check requirements across Texas health and human service, law enforcement, and education agencies, as well as other licensed professionals. Determine best practices, develop cross-agency standards, and make recommendations for reducing costs and streamlining the process.

### **Background**

Recently, incidents have arisen in which state employees in positions of trust have inflicted harm upon individuals under their care. One of the most notable examples is the 2007 Texas Youth Commission scandal, in which at least two employees at a Texas Youth Commission facility sexually abused juveniles in their custody. There have been other instances in which vulnerable populations, such as children and the elderly, have been put at risk because state employers were not aware of criminal history incidents in an employee's past. Conducting criminal background checks is one method to screen prospective employees and applicants. According to a survey cited in a report by The National Consortium for Justice Information and Statistics, more than 80 percent of employers conduct criminal background checks on prospective employees.<sup>13</sup> In light of past incidents and the increasing trend authorizing criminal background checks for non-criminal purposes, the Senate Committee on Government Organization was charged with studying criminal background check procedures and authority at certain state entities. The Committee heard testimony on the charge on October 27, 2008.

#### **Agencies with Criminal Background Check Authority**

The General Appropriations Act, 80th Legislature, Article IX, Section 19.68, required the State Auditor's Office (SAO) to identify deficiencies in state agencies' and institutions' criminal background check procedures and determine whether certain agencies and institutions should have the authority to conduct criminal history background checks. David Gavin, Department of Public Safety Assistant Chief of Administration, testified that entities must have express authority to access Department of Public Safety (DPS) or Federal Bureau of Investigations (FBI) fingerprint-based criminal history records. Chapter 411, Subchapter F, Texas Government Code, provides certain entities with that authority. Public Law 92-544 provides for federal criminal background checks. SAO representative, Ileana Barboza, testified that even agencies that don't have the statutory authority to conduct criminal background checks through the DPS or FBI, can still acquire criminal history information from potential employees or licensees directly.<sup>14</sup>

The SAO report covered 157 state agencies and institutions. 70 percent of those entities reported that they are authorized to conduct checks on at least one staff person.<sup>15</sup> 83 percent of those agencies and institutions reported that they conduct criminal background checks on employees, contractors, licensees, service providers, or students. Of the agencies and institutions authorized or required to conduct checks on at least

one staff person, 93 percent conduct checks on at least one of those positions.<sup>16</sup> 96 percent of the agencies that are authorized to conduct checks on license applicants reported that they conduct checks on some or all applicants for licenses.

#### Agencies that do not conduct background checks

Two agencies, the Texas Commission on Environmental Quality and the Board of Architectural Examiners, reported that they do not conduct checks on license applicants. According to the SAO report, the following agencies reported being authorized or required to conduct checks on at least one employee or staff position, but do not:

- The Health and Human Services Commission;
- The Higher Education Coordinating Board;
- The Commission on Fire Protection;
- The Credit Union Department;
- The Board of Examiners of Psychology;
- The Board of Veterinary Medical Examiners;
- The Commission on Environmental Quality; and
- The Texas State University System.

Almost 20 percent of the agencies that renew licenses reported that they do not conduct background checks when individuals renew their licenses. Those agencies are: the TCEQ; the Board of Architectural Examiners; the Securities Board; the Real Estate Commission; the Optometry Board; and the Commission on Fire Protection.

According to SAO, five of the 40 agencies and institutions that have the authority to conduct background checks on contractors or subcontractors do not conduct any checks on those parties:

- The Texas A&M University System Health Science Center;
- The University of Texas Brownsville;
- The School for the Deaf;
- The Juvenile Probation Commission; and
- The State Board of Plumbing Examiners.

Agencies that have the authority to conduct criminal history background checks, but don't, cited several reasons for not conducting checks, including a lack of resources, lack of awareness of the authority, and lack of reason to check.

#### Senate Bill 9

Last legislative session, the Texas Legislature passed SB 9 (Shapiro, Hinojosa), which required fingerprint checks for certain school employees and applicants, including certified educators, substitute teachers and aides, and charter school teachers. The legislation also statutorily created the DPS criminal background check clearinghouse, which is discussed further below.

## Discussion

### What is criminal history record information?

Chapter 60, Texas Code of Criminal Procedure, defines the Computerized Criminal History System (CCH) as the statewide repository of criminal history data reported to DPS by local criminal justice agencies in Texas. Chapter 60 requires that information on arrests, prosecutions, and the disposition of cases for individuals arrested for Class B misdemeanors or higher violations are included in the CCH.<sup>17</sup>

Chapter 60 also provides for an Incident Tracking Number (TRN) and Incident Tracking Number Suffix (TRS) to link charges from arrest through adjudication. The TRN and TRS ensure that the disposition of each arrest charge can be tracked through the criminal justice system.<sup>18</sup> However, to fully take advantage of this capability, each reporting entity at the local level, including arresting agencies, prosecuting agencies, and court clerks, must accurately report criminal history information.

Federal law defines criminal history record information as information collected by criminal justice agencies on individuals, including "identifiable descriptions and notations of arrests, detentions, indictments, information, or other formal criminal charges, and any disposition arising therefrom, including acquittal, sentencing, correctional supervision, and release."<sup>19</sup>

### Types of Background Checks and Costs

There are two main types of methods by which criminal background history checks are conducted—name based checks and fingerprint checks. According to SAO, 43 percent of all background checks conducted by agencies and institutions are name-based checks.<sup>20</sup> Name-based checks, which generally use DPS's website, are the least expensive method of conducting criminal background history checks, costing about \$1.00 per check.

The alternative method of conducting a criminal background history check is by fingerprint. Mr. Gavin also testified that fingerprints are critical to positive identification. Fingerprint background checks range from about \$15.00-\$45.00 depending on whether the fingerprint is checked by a state or federal service and the cost of acquiring the fingerprint.<sup>21</sup> As mentioned above, specific legislation is required to access DPS's secure fingerprint database, as well as the FBI database, the Interstate Identification Index (III).

Although fingerprinting is more expensive than name-based checks, a variety of sources, including the United States Attorney General's Office, The National Consortium for Justice Information and Statistics, DPS, as mentioned above, and SAO have concluded that fingerprint-based checks are "more accurate because a fingerprint is unique to each individual, while an individual's name is not."<sup>22</sup> Mr. Gavin testified that, according to the U.S. Attorney General's report, 11 percent of subjects searched by fingerprints would have been missed if a search on them had been conducted by a name-based search. The report noted that name-based checks pose the "twin risks" of possibly resulting in false positives, when a person with a common name is associated with another person's



record, or false negatives, when a record is missed because an individual provides false information.<sup>23</sup> Fingerprint checks are also considered more complete because they can be run through both the DPS's and the FBI's systems.

There are several obvious benefits of conducting criminal background checks by each method. According to DPS, name searches are more convenient because the state just needs a name to look up. Fingerprints require some action by the person making the application. However, according to DPS and a Texas Commission on Law Enforcement Standards and Education representative, that action is made easier by Fingerprint Applicant Services of Texas (FAST) electronic fingerprinting live scan sites across the state for fingerprint capture.<sup>24</sup>

When an individual makes a fingerprint submission, DPS retains the fingerprint and is able to provide ongoing notifications upon arrest. As required by SB 9, DPS has created an email notification system that notifies an agency that has subscribed to the DPS clearinghouse for information on certain fingerprints if a person who has had her fingerprints submitted to DPS for that purpose is arrested. Technically agencies and institutions have the ability to look at everyone's record in the system; but, agencies and institutions only have the authority by statute to view the records of certain individuals.

#### Source of Criminal History Data

As mentioned above and by the DPS representative during the hearing, Chapter 60, Code of Criminal Procedure, requires arresting agencies, prosecuting agencies, and courts to report events to DPS for its criminal history information. DPS reports that information, which is fingerprint-based, to the FBI for inclusion in the national database.

Private companies typically conduct name-based checks in addition to using commercial databases and private expertise. Generally, the information from commercial databases is obtained from county courthouses, state correctional facilities, and public criminal history databases provided by the state. Information provided by commercial databases is also generally derived from a variety of sources, including social security numbers, past addresses, credit and consumer agencies, past employment records, records from public criminal history databases, civil courts, assessors' offices, county clerks, military records, and educational institutions.<sup>25</sup> Commercial databases are not considered complete because not all states and state agencies make their records available to private companies.<sup>26</sup>

As potentially promising as the DPS fingerprint criminal history records and clearinghouse tracking system are, an important factor to consider in relying on that information is its accuracy and completeness. An August 2008 DALLAS MORNING NEWS article reported that in 2006, counties submitted outcomes in only 69 percent of criminal charges.<sup>27</sup> Angie Klein, manager of the DPS criminal history bureau, blamed the slow resolution of many felony cases on "glitches in big urban counties." Another cause of missing data occurs when "officials in smaller cities may forget to tell DPS when they

drop charges.” The article noted that “no one knows how many Texans didn’t get a job because an acquittal or dismissal wasn’t in the system” and that a surge of complaints from job seekers whose acquittals or charge dismissals weren’t in the database has led DPS to double the size of its error resolution unit to 20 employees.

In 2006, according to the article, some counties, such as Webb County, which includes Laredo, sent only 2 percent of required updates. In that same year, Travis County sent only 13 percent. Larger counties actually fared better in 2006. Dallas County sent 71 percent of its required updates and Harris County sent 100 percent of its updates.

In order for the fingerprint-based DPS records to maximize the efficiency of state employers and licensors, local entities must report updates as they are required by law. The legislature, working with local governments, law enforcement agencies, and courts, must agree on some system of incentives to improve compliance and the accuracy of the DPS Computerized Criminal History System. Incentives could include additional resources for technology or additional staff to improve compliance rates. Penalties for failing to improve the accuracy of criminal history information should also be considered.

#### Review of Health and Human Services, Education, and Other Agencies

##### *Health and Human Services<sup>28</sup>*

The Texas Health and Human Services Commission (HHSC) does not have specific statutory authority to conduct criminal background checks on any employees, job applicants, or volunteers. However, all Health and Human Services (HHS) agencies are authorized to conduct criminal background checks on employees, job applicants, and volunteers who have access to information resources or information resource technology, as all state agencies do, under Section 411.1405, Texas Government Code. Before an agency can conduct a background check under that statute, its policies and procedures relating to those checks must be approved by the Office of the Attorney General. HHSC has not utilized this provision to date.

HHSC agencies that comprise the Department of Assistive and Rehabilitative Services (DARS) have varying authority to conduct criminal background checks. According to HHSC, DARS currently conducts criminal background checks on all applicants for employment under the authority formerly granted to the Texas Rehabilitation Commission and the Texas Commission for the Blind. DARS legacy agencies and each agency’s authority is as follows:

- Texas Rehabilitation Commission (TRC), Section 411.117, Texas Government Code (authorizing criminal history checks for an applicant of TRC’s rehabilitative services; a TRC client; or an applicant whose duties possibly allow direct contact with TRC clients).

- Texas Commission for the Blind (TCB), Section 411.0985, Texas Government Code (authorizing criminal history checks for an applicant for employment with TCB).
- Interagency Council on Early Childhood Intervention (ICECI), Section 411.1142, Texas Government Code (authorizing criminal history checks for matters that relate to employees or applicants for permanent, temporary, or consultative employment, potential employment, or volunteer work that puts an individual in direct contact with or gives the person the opportunity to be in direct contact with children).
- Texas Commission for the Deaf and Hard of Hearing, Section 411.1131, Texas Government Code (authorizing checks on a person who is an applicant for a staff position at an outdoor training program conducted by a private entity through a contract with the commission for children who are deaf or hard of hearing).

Texas Department of Aging and Disability Services (DADS) has the authority to conduct checks on certain employees, job applicants, and volunteers. Certain DADS' licensed or regulated entities and contractors also have statutory authority to verify the employability of individuals by conducting pre-employment criminal history background checks. DADS' authority to conduct non pre-employment checks is as follows:

- State schools, Section 411.115, Texas Government Code (authorizing checks on applicants, employees, and volunteers of certain mental health facilities, including state schools).
- Guardianship programs, Section 411.1386(a-1)(requiring background checks on several individuals, including professional guardians and guardianship program staff).
- Providers or provider applicants for Medicare Assistance Programs, Section 411.1143, Texas Government Code (authorizes DADS to conduct criminal background checks that relate to a provider under the medical assistance program or a person applying to enroll as a provider under the medical assistance program).

The Department of Family and Protective Services (DFPS) has the authority to conduct criminal background checks on all of its employees, job applicants, and volunteers under Section 411.114, Texas Government Code. Generally, DFPS determines whether a criminal background check on employees, job applicants, and volunteers is warranted if the person has direct contact with clients or access to secured information. DFPS also conducts checks on applicants for license, owners, operators, employees, and applicants for employment of child care facilities, maternity homes, child-placing agencies, and family homes. DFPS is also authorized to conduct checks on a host of other individuals.<sup>29</sup>

The Department of State Health Services (DSHS) has authority to conduct criminal background checks on employees, job applicants, and volunteers of state health

hospitals under Section 411.115, Texas Government Code. DSHS also has additional authority to conduct background checks and require disclosure of certain offenses as they relate to certain licensing professionals DSHS oversees under Section 411.122, Texas Government Code.<sup>30</sup>

The most common method for conducting criminal history background checks for HHSC agencies is a name-based check, although fingerprint checks are also regularly conducted. Care facilities and home and community support services agencies conduct name-based checks through the DPS or commercial entities.

According to HHSC, HHS agencies conduct 100 percent of required criminal background checks for individuals offered a position in a health and human services agency. HHSC also reported that 97 percent of authorized checks are performed. HHSC attributes the 3 percent of checks that are not conducted to certain information technology positions.<sup>31</sup>

Generally, HHSC relies on agency-specific provisions to determine how each agency conducts its criminal background checks and notes that the legislature has not mandated bars to employment for every agency under HHSC's purview.

According to the information provided, DFPS conducts checks on all job applicants. By the end of 2008, DFPS plans to begin annual criminal background checks on its employees. Criminal background checks are already performed annually on certain employees at DADS state schools, DSHS state hospitals, and DFPS.

SAO reported that 24 of the 32, or 75 percent, health and human services agencies and regulatory agencies have written policies and procedures for conducting background checks.<sup>32</sup>

### *Law Enforcement*<sup>33</sup>

Sections 411.1405(e) and 411.112, Texas Government Code, give the Commission on Law Enforcement Officer Standards and Education (TCLEOSE) the authority to conduct background checks on all employees and all licensees. TLCEOSE establishes minimum standards, education, and training for licensing officers, county jailers, and public security officers in the state.

TCLEOSE conducts name-based searches on its employees and a combination of name-based and fingerprint searches, which the agency is required to keep on file, on licensees. The agency conducts criminal history checks on 100 percent of the employees and licensees it is required to conduct checks on and 100 percent of the employees and licensees it is authorized to conduct checks on.

TCLEOSE conducts yearly driving history checks on its employees and receives notification from DPS if a licensee is subsequently arrested.

SAO reported that the Commission on Law Enforcement Officer Standards and Education has the authority to conduct checks, but does not have a written policy for conducting those checks. However, since SAO concluded its study, TCLEOSE has adopted a written background check policy .

### *Education Agencies*

#### Higher Education

Texas institutions of higher education derive their authority to conduct criminal history checks from Section 411.094, Texas Government Code. Institutions of higher education are defined by Section 61.003, Texas Education Code, as any public technical institute, public junior college, public senior college or university, medical or dental unit, public state college, or other agency of higher education under that section. 69 percent of the higher education institutions surveyed for the SAO report reported that they conduct background checks on students who have certain majors, including several health related areas, education, law, and social work. Nursing, allied health, and education were reported as the three academic majors for which the highest number of background checks were conducted.

#### Early Education<sup>34</sup>

The Texas Education Agency (TEA) does not have the authority to conduct criminal history checks on its employees beyond the general authority granted to members of the public under Section 411.135(a)(2), Texas Government Code, which allows members of the public to obtain certain criminal history information maintained by the DPS.

The TEA has the authority to conduct criminal background checks on certain noncertified individuals, including an individual who is: employed or an applicant for employment by a school district or open-enrollment charter school; employed or is an applicant for employment by a shared service agreement if the person's duties are or will be performed on school property or another location where students are regularly present; or is employed or is an applicant for employment by certain entities that contract with school districts, open-enrollment charter schools, or shared services arrangements under Section 411.0901, Texas Government Code.

The State Board for Educator Certification does have the authority to obtain criminal history record information on applicants for educator certification under Section 411.090, Texas Government Code.

The TEA conducts both fingerprint and name-based checks, but primarily uses fingerprint based checks.

Since January 1, 2008, 71,377 of approximately 392,000 certified educators have been fingerprinted and 51,115 noncertified individuals, including substitutes, have been fingerprinted. According to the agency, TEA is conducting checks as scheduling allows.

Under the law, the TEA and the State Board for Educator Certification have until September 1, 2011 to obtain criminal histories on certified educators who were not previously fingerprinted. Approximately 43,000 applicants for certification were fingerprinted during Fiscal Year 2007-2008. To date, no certified charter school employees have been fingerprinted. However, fingerprinting for charter school employees is in the process of being scheduled.

TEA has completed checks on 100 percent of applicants for certification, as well as non-certified employees as they are submitted by school districts. The agency is currently conducting or is in the process of conducting criminal background checks on all licensees, as authorized. Each individual fingerprinted for the TEA is entered into the DPS database and flagged, or identified, as being an education related individual. If an individual who is flagged is subsequently arrested in Texas, TEA is notified.

*Other Licensed Professionals –Texas Department of Licensing and Regulation*

Chapter 53, Texas Occupations Code, grants the Texas Department of Licensing and Regulation (TDLR), as well as other licensing entities, the authority to revoke, suspend, or deny a license based on a person's criminal history. TDLR testified on the licensing of electricians and barbers, and provided background information on its criminal conviction review process during the hearing.

TDLR has authority to deny applications for licensure under Chapter 53 if an applicant has been convicted of a felony or misdemeanor that directly relates to the duties or responsibilities of the licensed occupation.

Since coming under the TDLR umbrella, 8,185 original and renewal barber applications were processed. 3 percent of those applicants had criminal convictions. 0.28 percent, or 23, of the applicants with criminal convictions that could be a basis for denying the license were referred to the agency's Enforcement Division. After the agency's review process, described below, only 0.04 percent, or 3 licenses were denied, revoked, or surrendered.

TDLR has processed 154,000 original and renewal applications for electricians. 14 percent of those applicants had a criminal conviction and 0.33 percent, or 519 licenses were denied, revoked or surrendered due to criminal conviction. See Appendix A for TDLR statistics on criminal history evaluations for its licensed occupations for Fiscal Years 2007 and 2008.

One witness testified that TDLR's process, with regard to addressing potentially disqualifying convictions, should serve as a model for the state. That process is discussed in further detail below under "Best Practices."

## Agencies to Which State Should Consider Giving Criminal Background Check Authority

### *Texas Veterans Commission*

During the hearing, Cruz Montemayor, Director of Human Resources, Texas Veteran's Commission (TVC), testified that the commission would like to have the authority to conduct criminal background checks on certain employees to comply with a federal requirement that certain employees with access to federal facilities and computers in federal facilities submit to background checks.

The TVC has approximately 320 employees, 95 of which are housed in federal facilities free of charge. Mr. Montemayor testified that, in accordance with the federal requirement, Homeland Security Presidential Directive 12 (August 27, 2004), certain employees in federal facilities must have their identities verified through fingerprint-based criminal history background checks. TVC requested the authority to conduct fingerprint criminal background checks on its employees to comply with the federal directive.

### *Texas Education Agency*

When asked about agencies that do not have specific authority to conduct background checks, but should have that authority, Mr. Gavin, the DPS representative, testified that the Texas Education Agency (TEA) does not have the authority to conduct checks on its employees even though the agency assists with checks for educator certification. TEA has indicated that statutory authority to conduct criminal background checks on certain employees would be desirable.

### *Certain Agencies with Investment Employees*

SAO reported that 15 percent of the state agencies that have "investment analysts, investment traders, and/or financial portfolio staff reported that they did not conduct checks" on any of the aforementioned positions.<sup>35</sup> Three agencies with those types of employees--the Pension Review Board, the Real Estate Commission, and the Water Development Board--reported that they don't have the authority, nor are they required to, conduct criminal background checks.

## Best Practices

### *Require Development and Use of Model Written Policy*

The SAO report found that state agencies and institutions apply statutes regarding background checks differently. To address this, SAO developed model background check policy components and procedures based on federal and state statutes and best practices. To streamline background check policies in the state, state agencies and institutions that have the authority to conduct criminal history background checks for noncriminal justice purposes should be required to follow a model based on best practices developed by SAO.

### *Move Toward Positive Identification*

Sources reviewed by the Committee emphasize that neither method of conducting a background history check is fool proof. However, each witness and all of the source material reviewed point to the accuracy of fingerprint background checks. Despite the higher cost of fingerprint checks, incidents in the past have shown that certain positions that give state employees access to sensitive information and vulnerable populations demand the most thorough and complete vetting possible. Thus, certain categories of employees should be required to submit to fingerprinting background checks.

Fingerprinting is probably also a better investment for the long-term use of criminal background history information because once DPS runs a fingerprint check, DPS retains that fingerprint information and notifies subscribing agencies and institutions within 48 hours after an employee, licensee, or contractor whose fingerprints are on record is arrested in the state. This program, the Fingerprint Applicant Clearinghouse of Texas (FACT), provides an invaluable service to subscribing agencies. However, if the state continues to move toward requiring additional classes of individuals to submit to fingerprinting, the state must consider making additional resources available through funding, technology, and personnel to meet increased demand.

### *Complete State Database*

Over the past four years, the FBI has seen an increase in the number of background checks for noncriminal purposes.<sup>36</sup> Despite the increase in demand for criminal background checks, the U.S. Attorney General's report noted that there is not a single source that provides complete and up-to-date information about a person's criminal history.<sup>37</sup> However, the report also notes that the FBI's system is the "most comprehensive single source of criminal history information in the United States."<sup>38</sup> Although the FBI system is comprehensive, the federal government itself admits that FBI-maintained records are not as complete as state records, which have dispositions ranging between 70 and 80 percent.<sup>39</sup> Thus, improving the quality of state records by providing for incentives and enforcing local compliance requirements should be a priority for the state as criminal background checks for noncriminal purposes such as licensing and employment become more common.

### *Access Control*

Preventing unauthorized access to criminal background history records was also discussed at the hearing. DPS concedes that monitoring unauthorized access to records, or access used for purposes other than what is prescribed by law, can be a huge vulnerability and challenge. However, DPS has administrative controls in place, such as requiring individuals with access to the information to sign acknowledgement forms, and regularly audits access to records to identify unauthorized use and provides educational training and other educational resources for individuals with access to records. Section 411.085, Texas Government Code, also makes unauthorized access or use of criminal history record information a criminal offense. Name-based searches are



generally the most vulnerable method because anyone can search using a name on DPS's site.

#### *The National Crime Prevention and Privacy Act*

The National Crime Prevention and Privacy Compact was signed into federal law in 1998 and became effective in 1999 after Georgia and Montana became the first states to ratify it.<sup>40</sup> The Compact establishes a legal structure by which states can exchange criminal records for non-criminal justice purposes according to the laws of the requesting state and provides reciprocity among the states to share records without charging each other. At the time the AG's report was published, the United States and 27 states were members of the Compact; three states and one territory had pending legislation to ratify the Compact to become members; and eight states had signed Memoranda of Understanding indicating that they would follow the rules of the Compact. Texas is one of the 15 states that had not taken any action to adopt the compact.

Although the prospect of the National Crime Prevention and Policy Compact is promising, upon consideration and discussion with DPS, the Committee has chosen not to recommend that the state ratify the compact. The structure provided by the Compact does not fully incorporate the technological advantages of electronically transferring fingerprint data, but offers a more outdated structure, relying on other methods. Thus, the Compact does not offer enough benefit for the Committee to recommend its adoption at this time.

#### *Texas Department of Licensing and Regulation Model for Addressing Convictions*<sup>41</sup>

The Texas Department of Licensing and Regulation (TDLR) provides a good model for addressing questionable criminal history information. TDLR, which is the state's umbrella occupational regulatory agency, regulates 22 occupations and industries. TDLR relies on its advisory boards to make recommendations on whether a certain criminal conviction directly relates to the respective occupational license applied for. The agency then submits recommendations to the Texas Commission of Licensing and Regulation to make a final decision on which offenses directly relate to each occupation. TDLR publishes guidelines stating the reasons why particular crimes are considered as they relate to each license granted by the agency.<sup>42</sup>

Most TDLR license applications require applicants to provide information about criminal convictions. TDLR runs a DPS criminal background check on each original license application and a sample of all renewal applications.<sup>43</sup> If either the application or the DPS check shows that the applicant has a conviction that could be a basis for denying the license, TDLR attorneys review the application further within three days. If the reviewing attorney determines that the license should be denied on the basis of a criminal conviction, the attorney obtains assistance from an investigator who interviews the applicant and gathers additional information. An applicant is notified of the potential denial of his or her application by a letter that specifically indicates the

convictions that form the basis of the proposed denial, cites the statutory authority for the proposed denial, and advises the applicant that a hearing may be requested to challenge the proposed denial. Appeals are heard before an Administrative Law Judge if requested by the applicant. The license of applicants who do not request hearings to challenge denials become final 20 days after the letter is issued.

### Balancing Reentry, Rehabilitation, and Public Safety

#### *Reentry*

There has also been much discussion around the country recently about the importance of prisoner reentry issues, as well as reducing the collateral consequences of criminal convictions. Prominent national policy organizations like the Council of State Governments,<sup>44</sup> American Bar Association,<sup>45</sup> and the National Conference of Commissioners on Uniform State Laws<sup>46</sup> have invested significant resources into examining best practices and bringing them to the attention of state and federal policymakers. Earlier this year, Congress passed and President Bush signed the Second Chance Act, which is “designed to improve outcomes for people returning to the community from prisons and jails” by authorizing federal grants for various reentry services.<sup>47</sup>

The attention seems to be driven by the large number of people released from prison every year and the increasing number of people who are locked out of the workforce because of a criminal record. According to testimony by Marc Levin, Director of the Texas Public Policy Foundation Center for Effective Justice, 20 percent of Texas adults, or 4.7 million people, have criminal records, assuming the state is similar to the rest of the country.<sup>48</sup> In Texas, over 55,000 inmates from prisons and felony jails were released into the community in 2001, according to the Urban Institute.<sup>49</sup> In order to avoid going back to prison, these ex-offenders must find employment, but that can be difficult thanks, in part, to the widespread use of criminal background checks.

Despite the difficulties faced by ex-offenders, the public – particularly vulnerable populations like children, disabled persons, and the elderly – must be protected from those who would do them harm. In the end, the state must carefully balance its responsibility of not placing dangerous individuals in a position that would create an unreasonable risk to the public, while also giving people with criminal history records the opportunity to care for themselves and their families.

The state must also ensure that innocent Texans are not being wrongfully jailed or denied opportunities to work due to faulty or incomplete criminal history data being kept and distributed by the Department of Public Safety (DPS). This incomplete data results in prosecutors not knowing if a person’s charges should be enhanced due to prior convictions, and police officers making traffic stops not knowing the full criminal background of a vehicle's driver or passengers.

Not only are Texans being denied jobs based on faulty criminal background history data, they are also being wrongfully incarcerated. This problem came to light in the recent U.S. Supreme Court case, *Rothgery v. Gillespie County, Texas*.<sup>50</sup> In that case, Mr. Rothgery was arrested on suspicion of being a felon in possession of a firearm after a background check indicated that he had previously been convicted of a felony in California. In fact, Mr. Gillespie had completed a diversion program, his charges were dropped, and he was not convicted. Because of his arrest, he could not find a job while the charges were pending "because the employers in his small Texas community knew of his arrest and believed, based on the nature of the charge, that he had a prior felony conviction."<sup>51</sup> Mr. Rothgery eventually spent three weeks in jail before his appointed attorney could prove that he was not a felon and that he was being wrongfully jailed.

### *Balancing Reentry with Public Safety*

While problems do exist, Texas appears to be doing a fairly good job of balancing the interests of ex-offenders who would like to reintegrate into society with the interest of the government in keeping its citizens safe. In general, criminal convictions do not result in blanket disqualifications of persons seeking a license for various occupations. While TDLR has the authority to deny an application for licensure if the applicant has been convicted of a felony or misdemeanor that directly relates to the duties of the licensed occupation, convictions do not result in automatic disqualifications. As mentioned above, the department conducts case-by-case reviews.

While TDLR may be doing a good job of balancing reentry and rehabilitation with public safety, other licensing agencies aren't so balanced in their approach. Mr. Levin notes that the Department of Public Safety's Private Security Bureau, which regulates 16 professions in the private security field, denied nearly 10,000 applicants in 2006 the opportunity to work because of their criminal history.<sup>52</sup> Some of these denials or license revocations were for long-ago, non-violent convictions or for arrests prior to a conviction which were not related to a person's job duties or performance.

It should also be noted that many jobs are in the private sector and do not require a license. Many of those employers may be summarily denying employment to persons with criminal background histories due to liability concerns or fear.

### *Disqualifying applicants for old, non-violent convictions*

In his testimony before the committee, Mr. Levin cited research that has shown that "after approximately seven years there is little to no distinguishable difference in risk of future offending between those with an old criminal record and those without a criminal record."<sup>53</sup> After a certain length of time, old convictions should be forgiven for purposes of occupational licensing for many occupations. Last session, Sen. Whitmire introduced SB 1750, which would have limited licensure disqualification to offenses that were less than five years old for most occupational licenses. Rep. Guillen has introduced similar legislation, HB 70, for the 81<sup>st</sup> session. Both bills would not apply to law enforcement or private security licensing, licenses issued under the authority of the

Supreme Court of Texas, or various health-related licensing boards, nor would they apply to serious or violent offenses. Rep Guillen's HB 70 would not apply to an offense in which "the person's status as a license holder enabled the person to commit the offense."

#### *Provisional licenses for non-violent persons*

To ensure that ex-offenders have opportunities to provide for themselves and their families, as well as pay restitution, fines, and court fees, Texas licensing laws should allow for provisional licensing if the conviction was recent and the conviction was not directly related to the occupation. Once again, both Sen. Whitmire's SB 1750 from the 80<sup>th</sup> session and Rep. Guillen's HB 70 for the 81<sup>st</sup> session would accomplish these goals. Licensing authorities could limit the practice of a provisional license holder and revoke a provisional license if the applicant commits a new offense, violates their term of supervision, or violates an occupational rule.

#### *Barriers to Employment*

Mr. Levin also noted that the state of Florida has made progress in reducing collateral consequences of a criminal conviction under former Governor Jeb Bush. This progress began when Gov. Bush issued Executive Order 05-28 to establish the Governor's Ex-Offender Task Force to "improve the effectiveness of the State of Florida in facilitating the reentry of ex-offenders into their communities so as to reduce the incidence of recidivism."<sup>54</sup> According to Vicki Lopez Lukis, Chairman of the Task Force, the formation of the task force and its resulting report have made a huge difference in terms of bringing attention to issue among legislators. Whereas reentry issues were never discussed at the legislature previously, bills are now making serious headway through the legislative process.<sup>55</sup>

While the Governor's Ex-Offender Task Force was in the midst of developing its recommendations in 2006, Governor Bush issued another Executive Order (06-89) to require all executive agencies to produce a report describing employment restrictions and disqualifications based on criminal records. These agency reports were submitted to the Task Force who completed another report in 2007, which found a variety of restrictions on employment and licensing for ex-offenders, and made a set of recommendations to ease employment restrictions on ex-offenders.

Some of the task force's recommendations were introduced into legislation in 2008 as part of SB 2152. The bill expanded the ability of ex-offenders to seal and expunge criminal history records; established that "restoration of civil rights cannot be required as a condition of eligibility for public employment or to obtain a license, permit, or certificate" for persons convicted of a felony or first degree misdemeanor; and required that "state agencies and regulatory boards submit to the Governor and legislative officers a report that outlines current restrictions on the employment of ex-offenders and possible alternatives that are compatible with protecting public safety." While the bill ultimately died in the House, it unanimously passed the Senate.

A similar comprehensive review of state agency employment restrictions could be helpful in Texas and result in reducing barriers to employment for persons with criminal history records.

#### Costs and Streamlining

Through the creation of the DPS fingerprint clearinghouse system as required by Section 411.0845, Texas Government Code, which requires DPS to provide notice of changes to a person's criminal history record information if that information changes in clearinghouse records within 48 hours after the department becomes aware of the change, DPS is able to update entities with minimal to no cost. However, further examination by the Legislative Budget Board is required to determine additional potential cost saving structures by which criminal background checks can be conducted.

#### **Conclusion**

In assessing whether a recommendation should be made as to the type of criminal background check, various factors have to be measured. Specifically, accuracy, cost, efficiency, necessity, and impact on reentry into the workforce of individuals who have criminal history records.

#### **Summary of Recommendations**

##### Cross Agency Standards

1. The Committee determined that several governmental entities that have the authority to conduct criminal background checks don't have written policies and apply their authority differently. The Committee recommends that the state require each entity that has the authority to conduct criminal background checks to have a written policy that is based on a standard model developed by the State Auditor's Office (SAO). SAO should use the *Equal Employment Opportunity Commission Compliance Manual* for guidance and consult with the Texas Department of Licensing and Regulation to develop the model. The model should be reviewed and updated if necessary, not less than every two years. The model should be flexible enough to allow each agency to tailor the policy to its needs, but should include the following:
  - a. a requirement that an entity's written policy include disqualifying offenses to be determined by the governmental entity based on the position or license for which an employee is applying or licensee is renewing;

- b. a method of appealing incorrect records determined by the government entity and coordinated with the Department of Public Safety for a no cost review of fingerprints for name based checks;
  - c. the statutory purposes for which a criminal background check may be conducted by the governmental entity; and
  - d. a minimum timeline for renewal background checks. If the governmental entity conducted a fingerprint criminal background check and is thereby receiving automated updates of Texas criminal activity, the timeline should be temporary until the FBI begins sending automated updates of national criminal activity.
- 2. The Committee recommends that, like Section 411.1405, Texas Government Code, authorizing checks on information resources employees, the legislature authorize each state agency to conduct fingerprint criminal background checks on positions that give individuals access to security-sensitive information or resources, including the following positions identified by the State Auditor's Office: executive; financial aid officer (in higher education institutions); fiscal officer; general counsel; human resources; information technology; sensitive information; and designated security sensitive areas.
- 3. The Committee determined that after a certain length of time there is presumably little to no distinguishable difference in risk of future offending between those with an old criminal record and those without a criminal record. The Committee recommends prohibiting licensing agencies from disqualifying applicants for old non-violent convictions unless the convictions are directly related to the occupation for which applicants are seeking to be licensed.
- 4. The Committee determined that ex-offenders should have opportunities to provide for themselves and their families by obtaining licenses so long as their convictions were not recent or directly related to the occupation for which they are seeking to be licensed. The Committee recommends establishing provisional licenses for non-violent persons with recent convictions not directly related to the occupation.
- 5. The Committee determined that there should be an examination of barriers to employment. The Committee recommends that a comprehensive examination of all state agencies is conducted to ensure that barriers to employment are

narrowly tailored and balance the interests of reentry, rehabilitation, and public safety.

#### Reducing Costs and Streamlining Process

6. The Committee determined that the Texas Department of Licensing and Regulation (TDLR) has an adequate process and procedure for conducting criminal background checks. The Committee recommends that TDLR develop a criminal background check model process to give guidance to smaller agencies.
7. The Committee recommends that the Legislative Budget Board examine the current cost structure for agencies accessing both name-based and fingerprint - based criminal history records to determine whether restructuring is needed and a more efficient cost-effective method exists for agencies accessing a large number of criminal history records.
8. The Committee determined that Texas criminal record information is only as good as the information provided by local governmental entities. The Committee recommends that the legislature, working with the Department of Public Safety and local governmental entities, consider adopting an incentive system for compliance and a reasonable penalty to be assessed against local government entities that fail to submit to the state arrest, prosecution, adjudication, and corrections information required to be reported under Chapter 60, Code of Criminal Procedure. Any assessment of penalties should provide various methods by which a local governmental entity may receive an exception for financial hardship.

#### General Recommendations

9. The Committee determined that fingerprint checks are more accurate than name-based checks. The Committee recommends that the state require certain agencies to move toward requiring fingerprinting. At a minimum, agencies should be required to require the fingerprinting of employees based on the agency's or the employee's:
  - a. direct access to the public;
  - b. obligation to serve vulnerable populations, especially children, the disabled, and the elderly;
  - c. responsibility over public funds; and
  - d. direct access to information resources or information resource technology.

10. Because of the vulnerable nature of the direct-care population, the Committee recommends that health and human services agencies are required to conduct fingerprint criminal background checks on employees, job applicants, and volunteers who have:
  - a. direct access to the public;
  - b. an obligation to serve vulnerable populations, especially children, the disabled, and the elderly; and
  - c. responsibility over public funds.
  
11. The Committee recommends that the Texas Veterans Commission be given the authority to conduct criminal background checks on employees who must have a fingerprint check as required by Homeland Security Presidential Directive 12 (2004).
  
12. The Committee recommends that the state grant the Texas Education Agency the authority to conduct criminal background checks on the agency's employees and contractors who have:
  - a. direct access to the public;
  - b. an obligation to serve vulnerable populations, especially children and the disabled; and
  - c. responsibility over public funds.
  
13. The Committee recommends that the state grant the Pension Review Board, the Real Estate Commission, and the Water Development Board the authority to conduct background checks on investment analysts, investment traders, and financial portfolio staff.



## **Interim charge on open document formats**

### **Charge**

Study the economic and security costs and benefits, both short-term and long-term, of adoption of an open document format for state-created documents.

### **Background**

After the 80<sup>th</sup> Texas Legislative Session, the lieutenant governor directed the Senate Committee on Government Organization to study the economic and security costs and benefits, both short-term and long-term, of adopting an open document format for state created documents following a session in which two identical introduced bills, H.B. 1794 and S.B. 446, statutorily mandated the use of an open document format for state-created documents. That legislation is discussed further below.

Those bills were the result of a movement in the information technology marketplace to create formats that are considered "open," or not owned by any particular vendor and available for use by everyone.<sup>56</sup> Texas was not alone in its consideration of that technology. Several states, including Minnesota, Florida, and New York, also considered similar legislation, but ultimately determined not to adopt legislation mandating the use of that technology.

The Senate Committee on Government Organization met on Monday, October 27, 2008, to hear testimony on the open document format charge. Representatives from various sides of the issue were present, including representatives from the Department of Information Resources, the Open Document Alliance, and Microsoft.

### **Discussion**

#### What is an open document format?

A file format is a way of organizing and displaying information.<sup>57</sup> File formats are indicated by the file name extension attached to a file. For example, a file saved in PDF or HTML is followed by ".pdf" or ".html", respectively. An open document format is an open file format for saving and exchanging editable office documents, such as text documents, spreadsheets, charts, and presentations.<sup>58</sup> An open standard is royalty free technology adopted by a standards committee that is open to participation by all interested parties. The purpose of an open standard, according to DIR, is "to allow a document to be read now and in the future, regardless of the software used to create the document."<sup>59</sup> Open standards allow products developed by various vendors to work together and are the result of a collaborative process for establishing published uniform technical specifications.

The International Organization for Standardization (ISO) has adopted several formats, including the Open Document Format (ODF), Open Office Extensible Markup Language (OOXML), and Portable Document Format (PDF). ODF was approved in May 2006 and OOXML was approved by ISO as recently as 2008.

### Summary of Bills Introduced in the 80<sup>th</sup> Legislative Session

In the 80th Legislative Session, two bills, SB 446 (Hinojosa) and HB 1794 (Veasey), which required the use of an open document format that includes interoperability, publication without restrictions, and the use of nonproprietary software, were introduced. Each bill carried a fiscal note of \$55.8 million for 2008-2009 and \$121.2 million over the biennium. The cost carried in the 80th session fiscal notes was reiterated in a response letter from DIR to Senator Gallegos.<sup>60</sup>

However, in a more recent letter to Chairman Ellis, Ginger Salone, Deputy Executive Director, Statewide Technology Service Delivery, Department of Information Resources, stated that projected costs are mitigated if, as is assumed, the majority of state agencies and institutions of higher education will be using one of the open standard products in the near future.<sup>61</sup> Thus, installation and training costs would be absorbed in normal operation costs.

### Which governmental entities have adopted an open document format standards?

As of the date of the committee's hearing on this issue, there were no states in the United States that had a current requirement that states use an open document format and no other format for the creation of state documents. The Massachusetts Information Technology Division did adopt a policy requiring state agencies to use an open document format in 2005. Since that time, the Massachusetts division has altered its policy to allow agencies to create and save records in several formats, including, ODF, OOXML, HTML, and PDF.<sup>62</sup>

The only country that has adopted a requirement for using a single format, the open document format, is Malaysia.<sup>63</sup> Several other countries that have adopted policies, such as Brazil, France, and Japan, favor open standards without relegating governmental entities to one particular standard.

### Economic and security costs and benefits

Proponents for adopting ODF, such as the ODF Alliance, argued that adopting a single format could increase compatibility and interoperability, and save the state as much as \$90 million over five years. Opponents, including Microsoft, argued that to accomplish true interoperability between formats, users of technology should have a choice in formats.

DIR promotes the adoption of open standards for document formats, but does not support a specific standard for several reasons.<sup>64</sup> First and foremost, the market cannot completely address the technical and business considerations that exist today. As Professor Gary Chapman of the University of Texas Lyndon B. Johnson School of Public Affairs testified, it is important to keep updating standards of technology so that current standards do not become obsolete. Open standards for document formats, which began gaining approval by ISO just a few years ago, are still evolving.

A major economic benefit of adopting the open document format, or any other open standard format, is that the format could make state created information more accessible to citizens in the long term. However, according to DIR, "present technology does not ensure that a document created by one open-standard-compliant product can be retrieved and read by a document created by a different, yet also compliant product." Accessible interaction between products will probably occur over time, but hasn't yet. And, although archival best practices recommend maintaining electronic files in an open format, "no current standard meets all requirements necessary for long term preservation."<sup>65</sup>

A possible cost of adopting an open document format is that certain products provide functionality and use for certain governmental entities that are not available in open standard products yet. For example, DIR cited valuable tools such as enhanced formatting, graphics, macros or formulas that could be lost in any transfer from current products to open standard products.

DIR also cited problems with accessibility for individuals with disabilities in regards to certain products that are currently in the market, which was a major consideration by other states that chose to withdraw mandating open document legislation in other states.

As mentioned above, the economic cost of adopting an open document format from 2007-2008 was over \$50 million last session. DIR contends that now, because a variety of commonly used office products, including Microsoft, which has announced that Office Suite 2007 will support the ODF open standard in the next scheduled release of that product in early 2009, have adopted open standards since the issue was considered last session, the economic costs of adopting an open standard are mitigated. The agency also presumes that the licensing, technical support, and training that might be required for such products will be an "ordinary and anticipated operating cost rather than a conversion and retraining cost specifically related to adopting open standards."

Peter S. Vogel, Texas Supreme Court Judicial Committee on Information Technology Chair, also testified that adopting an open document format would not be in the best interest of local governments. The state funds 16 appellate courts and district judges, but does not fund the local 432 district and county courts.

DIR was not aware of any security costs caused by the adoption of open standards for document formats.

## **Conclusion**

Government information must be accessible to the public, which is why the state's ability to view, store, utilize, and share information is critical. One witness offered the following example: after Hurricane Katrina hit the southern Gulf Coast region in 2005,

the federal internet website for assistance was inaccessible to members of the public, not because they didn't have access to internet technology, but because the internet program they attempted to use was inoperable with the program used by the federal government to collect information.

DIR currently has the authority to promulgate rules regarding technology policy. The Texas State Library and Archives Commission, the agency charged with preserving and managing state documents, also has a provision in its *Electronic Records Standards and Procedures* bulletin that requires any electronic system developed or acquired by a state agency to "provide a standard interchange format...to permit the exchange of records on electronic media between agency computers using different software/operating systems and the conversion or migration of records...from one system to another."

With this in mind, the committee recognizes the importance of making state information accessible. However, the committee has not determined that the goal of accessibility will be reached by taking a single path. The Committee has determined that the most appropriate action at this point is to direct state information technology leaders to further examine and make findings on how state information can become more accessible and interoperable, including whether the best path to that goal is the adoption of open standards and particularly the adoption of a single standard.

DIR, with the assistance of the Records Management Interagency Coordinating Council (RMICC), which is an interagency group focused on electronic state record policy, is currently studying open standards to develop recommendations on how the state should proceed on the issue. Both DIR and the Texas State Library and Archives Commission, which have the authority to promulgate rules and require adherence to technological standards, support RMICC recommendations. Furthermore, "the choice or use of a standard must not be to adopt a standard for the sake of adopting a standard. Any choice must be in the context of what value such a decision adds to government."<sup>66</sup> The Committee has determined that moving toward an open standard for creating state documents adds value to state government. But, with respect to the value added by the adoption of a specific standard, the Committee defers to DIR.

### **Summary of Recommendations**

1. The Committee does not recommend that the state adopt an open document format at this time. However, the Committee recommends that the Department of Information Resources continue to move state agency technology policy towards accessibility and interoperability.
2. The Committee recommends that the Department of Information Resources, in collaboration with the Records Management Interagency Coordinating Council (RMICC), conduct further study to determine the best, most secure and cost-

efficient method for the state to ensure accessibility to state documents and interoperability where desired.

## **Interim Charge on High Performance Building Standards**

### **Charge**

Study whether Texas should adopt high performance building standards. In light of the potential impact of Texas' population growth on the need for electricity and water, study whether high performance buildings can cost-effectively lower utility costs and make more efficient use of natural resources.

### **Background**

Buildings are the major source of demand for energy and materials that produce by-product greenhouse gases (GHGs), consuming 76 percent of the nation's electricity and producing 48 percent of the nation's GHGs. Texas, meanwhile, is the leading carbon dioxide (CO<sub>2</sub>) emitter in the United States, emitting 11.5 percent, and accounts for 2.5 percent of global CO<sub>2</sub>. Scientists allow for 10 years from now in which time, GHG emissions must be substantially reduced to prevent catastrophic climate change. Approximately 75 percent of buildings in the U.S. will be new or renovated by the year 2035, providing a window of opportunity to reduce energy needs and GHG emissions.<sup>67</sup>

Resource management initiatives involving buildings have largely rested on municipal discretion. The City of Austin's Green Building™ program began implementing green building technologies in its municipal facilities in 1993; and in 2000, the City Council passed a resolution requiring all municipal buildings to meet the United States Green Building LEED silver rating.<sup>68</sup> San Antonio passed a similar resolution in 2007.<sup>69</sup> Elsewhere, California has historically been the most aggressive state in terms of setting energy efficiency standards for home appliances, establishing the nation's most stringent building energy codes, and funding efficiency programs. Earlier this year, the State of Maryland passed legislation setting a "15 by '15" target (15 percent reduced energy consumption by 2015) and requiring that new state buildings and public schools implement energy-efficient and environmentally-friendly designs and materials.<sup>70</sup>

Public buildings should lead by example through optimal efficient resource use. However, state and municipal governments as well as school districts tend to have limited capital and expertise to invest in major efficiency practices, despite environmental and economic justifications for doing so and the amount of taxpayer money freed up in the process. Texas should therefore enforce high performance standards for new and old public buildings while also encouraging builders of commercial, residential, and industrial facilities to follow suit through (1) more stringent building codes and (2) market transformation, including incentives for high performance building.

## Discussion

Inefficient building practices lead to a greater strain on the electric grid, contribute to rising energy prices, and, in the case of public building maintenance, needless spending of taxpayer money. These mounting concerns, coupled with global warming and water management issues, demand more efficient behavior and better reuse of resources in building construction and maintenance.

Energy use in the building sector contributed to one-third of total global CO<sub>2</sub> emissions in 2004, a share that could rise to 35-42 percent by 2030. At the current rate, energy use in buildings will release to the atmosphere 11.8 to 15.6 Gt CO<sub>2</sub> eq. (billion tons of carbon dioxide equivalent) in 2030, up from 8 Gt in 2004.<sup>71</sup> Texas remains one of the most polluted states in the nation, with Houston (rated #5 in 2007) and Dallas (#7) consistently ranking among the top 10 most polluted cities in the country by the American Lung Association.<sup>72</sup> The state's heaviest industrial building regions, notably the Houston Ship Channel and the Golden Triangle in southeast Texas, produce prodigious amounts of sulfur dioxide; nitrogen oxides; benzene; 1,3 butadiene; and particulate matter – all of which are associated with rising incidences of asthma, heart disease, birth defects, cancer, and neurodegenerative disorders.<sup>73</sup> Asthma alone accounts for over two million emergency room visits, 5000 deaths, and 14 million missed school days per year in the United States, totaling more than \$14 billion in health care costs and lost productivity.<sup>74</sup>

The Texas 2007 State Water Plan predicts total water demand from all sectors will increase 27 percent by 2060, when the population is expected to double its current levels. Water management is proving more difficult due to population growth and climate change. The 2005-06 drought that afflicted much of the state portends a near future of extended dry seasons that would further strain groundwater supplies. The high costs of developing new reservoirs and of water treatment necessitate more aggressive state and municipal water conservation programs. Houston, El Paso, and San Antonio currently have the most aggressive short-term water conservation goals, aspiring to less than 140 gallons per capita per day by 2015.<sup>75</sup>

### Benefits

Energy efficiency can make the most immediate impact on energy and environmental concerns. All told, greater efficiency can reduce overall electricity costs, boost net employment, and reduce air pollutants.<sup>76</sup> Improved water management reduces costly threats of subsidence and saltwater intrusion due to the over pumping of groundwater.<sup>77</sup>

Efficient resource management also yields numerous financial dividends. High performance building initiatives in 31 case studies observed by the City of Seattle's Sustainable Demand Project identified the following economic benefits of high performance building:

- Office productivity increased (up to 16%)
- Absenteeism reduced (by as much as 40%)
- Increased market value of building stock (up to 100%)
- Overall paybacks under a year
- Return on investment (up to 1000%)
- Decreased energy costs (up to 90%)
- Decreased M&O costs (up to 73%)
- Reduction in liability insurance
- Reduction in workers comp cases
- Increased retail sales (up to 40%)<sup>78</sup>

The opportunity costs of water conservation programs are particularly favorable considering the high cost of water treatment and of siting and developing new reservoirs. The array of policy levers include reuse of wastewater for non-potable purposes (such as irrigation and cooling towers), rebates for water-efficient appliances, and subsidies for low-flush toilet and low-flow shower retrofitting.<sup>79</sup>

#### Costs

Even in retrofitting existing building stock, numerous energy-saving options are eminently viable and cost-effective. The following high performance building techniques that have been linked to both environmental and economic benefits:<sup>80</sup>

- Delighting\*
- Daylight control to reduce HVAC loads
- Light shelves for shading
- Light and occupancy sensors
- Narrow floor plans to optimize natural daylight
- High benefit lighting upgrades
- Under floor air distribution
- Natural/displacement ventilation\*
- Occupant control of heat, light and air
- Operable windows and mixed mode HVAC
- Exposed thermal mass of building structure
- Advanced filtration and good ventilation rates
- Properly commissioned and maintained HVAC systems (cogeneration/CHP – see below)
- Solar heating and hot water\*
- Solar photovoltaic panels\*
- Geothermal heat pumps\*
- Remote wind power\*

(\* Renewable energy capability)



Payback periods vary depending on the extent of retrofitting, but they are often dramatic. Continuous Commissioning®, a form of skilled energy-efficiency monitoring, tends to reduce energy costs by roughly 20 percent in existing building stock. Continuous Commissioning in the Texas Capitol Extension Building and Starr Building in Austin have produced annual energy bill savings of \$144,700 (about 27 percent) and \$130,000 (about 27 percent), respectively.<sup>81</sup> Continuous Commissioning is particularly critical for facilities that depend on cogeneration, also known as combined heat and power (CHP).

CHP, which can achieve energy efficiencies of 60-90 percent, is particularly suited to large complexes, such as schools and universities. By drawing on relatively clean-burning natural gas, GHG emissions are greatly reduced. CHP generators, which provide on-site power, also provide security and reliability from unpredictable power outages of the electric grid. With net metering, CHP could feasibly generate revenue in the event that surplus power is generated and returned to the grid (barring effective decoupling mechanisms, the feasibility of such a pursuit would be largely restricted to regulated electricity markets such as Austin and San Antonio).

The Texas LoanSTAR program remains a popular and effective resource for assisting state and municipal facilities in making energy-efficient investments. Roughly 200 facilities have received LoanSTAR funding to date, resulting in an energy savings average of 15 percent. The American Council for an Energy-Efficient Economy (ACEEE) recommends expanding LoanSTAR's revolving fund from \$95 million to \$300 million – supported through loan repayments and lower energy costs over time – to ensure half of all eligible facilities receive assistance over the next 15 years.<sup>82</sup>

State government can also help stimulate the recycling of building materials, which reduces costs and energy needs. According to the Associated General Contractors of America, a typical construction project produces as much as 2.5 pounds of waste per square foot of new floor space, contributing a tremendous amount of residential, commercial, and industrial refuse to landfills in the absence of consolidated recycling efforts. In 2003, the Texas Department of Transportation spent roughly \$677 million on recycled materials such as crushed concrete and recycled steel, preventing 2.5 million tons of refuse from winding up in state landfills and saving the agency more than \$1.2 million in crushed concrete along.<sup>83</sup> Still, parts of the state suffer from a lack of recycling markets, and education in the construction industry could be improved. Salvageable building materials include crushed concrete from buildings, roadways, pavements, and airfields; reclaimed metals, particularly steel and aluminum; and glass.

## **Conclusion**

The state of Texas should set a policy goal that by 2030 no new buildings would require more energy than they produce. The state should focus first and foremost on more efficient use of current energy resources as the most immediate means of reducing

energy usage and GHGs. McKinsey & Co. found that while most carbon reduction strategies have a cost of \$30-\$60 per ton of carbon (e.g, distributed PV, carbon capture at a coal plant, etc.), most commercial energy efficiency measures realize short-term payback periods, beyond which savings in terms of energy costs and natural resources become amplified.<sup>84</sup>

Much of the policy approaches to global warming will necessarily be federal or even global. That does not mean, however, that Texas does not have excellent policy levers at its disposal. In fact, Texas is already a leader in energy efficiency. ACEEE ranked Texas 19th in its annual survey of states' energy efficiency efforts and noted that Texas was the first state to adopt an Energy Efficiency Resource Standard (EERS). The standard was doubled in the 80th Legislature, but ACEEE points out that even with the increase, the EERS standard translates to only a 0.4 percent reduction in energy usage. The Public Utility Commission will produce a study in time for the 81st session: if the study finds that the EERS can be increased, it should be. Increasing the EERS would provide an excellent opportunity for the state to strengthen its economy and lower GHG emissions.

Further, the Legislature should adopt some form of SB 445 from the 80th session. This bill, in its final form, would have required all state buildings to be highly energy and water efficient. By adopting this legislation, the state would not only lead by example on reducing GHG emissions but would also save significant taxpayer money.

Private industry also sees advantages in reusing materials. Manufacturers, power generators, and demolition companies search for opportunities to reuse their byproducts and salvaged materials to reduce disposal costs. Also, putting these materials to use saves on hauling costs, particularly when new materials would have to be transported from long distances. There are air quality benefits, too, because diesel trucks make fewer trips.

The state should also offer franchise tax exemptions and/or reductions for private buildings that have independent certification (e.g., LEED, Green Globes, Austin's Green Building certification, etc.) of energy and water usage reductions. The International Energy Conservation Code Council will have new codes published next year that will mandate all buildings achieve a substantial (approximately 30 percent) higher efficiency than the previous codes. The state should incentivize developers to outlay more capital to go another 20-30 percent above that code.

The next step beyond a highly energy efficient building is a net-zero energy building. A building that is highly efficient needs very little power to operate, and that power could be provided by on-site generation, such as solar or CHP.

The advent of zero-energy buildings will depend on the widespread viability of small-scale renewable power sources that negate the small amount of energy they use. The non-profit organization Architecture 2030 has challenged the global architecture and

building community to adopt the following carbon-reduction targets: 60 percent in 2010, 70 percent in 2015, 80 percent in 2020, 90 percent in 2025, and 100 percent by 2030.<sup>85</sup> To achieve these targets, short-term goals include:

1. 30% above code on energy efficiency;
2. 30% above code on water efficiency; and
3. reuse of construction waste.

Revised building codes represent the first step toward achieving environmental and social goals which the market cannot fulfill on its own. “Beyond code” mechanisms complement building codes in facilitating the kind of dramatic market transformation required in the near future. Such mechanisms include:

- Industry awareness/education (CHP, green building techniques, regulatory processes)
- Time-of-sale energy audit (energy scoring program that would encourage efficiency in new and old buildings)
- Stretch codes (benchmarks set by jurisdictions seeking to exceed building codes)
- Incentives (tax incentives, tax rebates, and/or tax deductions frequently used in retrofitting)
- Funding for research and technology development (DOE-sponsored public-private Building America program)
- Weatherization assistance program (federal and state grants that reduce natural gas use)
- Energy Star (certified buildings, appliances)
- LEED certification (mandates and/or tax credits for new buildings)<sup>86</sup>

The ACEEE recommends that a combination of training and technical assistance for architects, engineers, and builders be coordinated through an organization, like Texas A&M, with extensive experience in advanced building techniques, with funding for such a program included in electric and gas rates.<sup>87</sup> Such training should include the incorporation of recovered construction and demolition materials into new projects, which saves money and reduces demands on natural resources and landfills.

### **Summary of Recommendations**

1. The state should focus first and foremost on energy efficiency as the most effective means of economically reducing energy usage. To achieve these targets, short-term goals include: (a) 30% above code on energy efficiency, (b) 30% above code on water efficiency, and (c) reuse of construction waste.

2. An increase in the Energy Efficiency and Resource Standards (EERS) would raise the state's efficiency standards and provide opportunities to strengthen the state's economy and lower greenhouse gas emissions (GHGs).
3. The Legislature should require all new state buildings to be highly energy and water efficient. By adopting this legislation, the state would not only lead by example on reducing GHG emissions, but also save taxpayer money.
4. The state should offer franchise tax exemptions and/or reductions for new private buildings that have independent certification (such as LEED™) of energy and water usage reductions. The state should incentivize developers to outlay more capital to go 20-30% above the International Code Council's building codes (approximately 30% higher efficiency than the previous codes).
5. The state should encourage "beyond code" mechanisms that complement building codes to achieve the dramatic market transformation required in the near future. Such mechanisms include industry awareness, time-of-sale energy audits, stretch codes, incentives, funding for research and technology development, weatherization assistance programs, Energy Star certified buildings and appliances, and LEED certification.
6. A combination of training and technical assistance for architects, engineers, and builders should be coordinated through agencies like the State Energy Conservation Office and organizations like Texas A&M's Energy Systems Lab with extensive experience in advanced building techniques. Such training should include the incorporation of recovered construction and demolition materials into new projects, which saves money and reduces demands on natural resources and landfills.
7. The state could incentivize school districts to build new schools to meet high performance standards. The average additional cost of a LEED building is about 1% of the total project cost, but a school is designed to function for 50-70 years. Thus, the decreased M&O costs far outweigh the slightly higher up-front cost. The state could offer a higher yield through the Existing Debt Allotment (EDA) to districts that choose to build highly efficient buildings.
8. The state of Texas should set a goal that by 2030, no new buildings should require more energy than they produce.

## **Interim charge on master-planned campus**

### **Charge**

Study options for developing a new master-planned campus to serve the needs of state government and provide for future growth. Consider locations accessible to the government center, as well as relative property values and lease rates. Consider divestiture of certain real estate assets within Travis County to take advantage of favorable market conditions and the cost and benefits of reducing reliance on leased facilities. Coordinate activities with the Texas Facility Commission and the General Land Office.

### **Background**

The needs of Texas state agencies are not being met by the current facilities offered to them. Unlike the facilities requirements for the legislative branch, which were met in the early 1990's with the Capitol building expansion and renovation project, Texas state agencies are faced with inadequate and unsuitable space to accommodate their needs.

The Senate Committee on Government Organization met on Monday, October 27, 2008, to hear testimony on the master planned campus charge. Edward Johnson, Executive Director of the Texas Facilities Commission, testified on the need for the state to develop a master planned campus to house a government center and the improvements in functionality this would provide.

The Texas Facilities Commission continues to examine the options for the development of a master planned campus and is still reviewing potential locations in and around the Austin area.

### **Discussion**

The Texas Facilities Commission manages 24 million square feet of state-owned and leased facilities at a cost of \$202 million per year with locations in 286 cities throughout Texas. These facilities serve 103 state agencies and their 60,265 employees, almost half of whom reside and work in the Austin area.<sup>88</sup>

Austin is currently witnessing a period of growth and revitalization that parlays into great changes for the area. However, with the changes, numerous problems have also surfaced that can be troublesome to the nearly 30,000 state employees that work there, including, increased traffic problems, higher costs of living and housing, and future limited space in the downtown area. These are concerns that the state must consider as it moves forward.

Although the state owns 6 million square feet of space in and around Austin, the State must lease an additional 2.7 million square feet to remain functional. Of that space, 90 percent of the leases will expire over the next four biennia, and if renewed or replaced, the state could potentially see substantial increases in the rental expenditures.<sup>89</sup>

Relocating the leased space to state-owned land could potentially be a more cost effective solution to the rising rental costs of the downtown area. Of the current rented amount of leased space, approximately 2 million square feet, accounting for \$30.7 million in annual rent could beneficially be relocated to state-owned space if it were available.<sup>90</sup>

In addition to the uncertainty of rental expenditures, much of the state-owned inventory is now in a condition that major capital expenditures will be required for maintenance and replacement of building components and systems.<sup>91</sup>

Many of the state-owned facilities are obsolete and over-crowded. The state has not constructed an administrative office building in the Austin area for 20 years and has not purchased one (with the exception of a lease-purchase option) in the past 17 years. The state has not considered a plan to deal with the changing development of central Austin or the new technological advances of building design and operations.<sup>92</sup>

Fulfilling the state's need for more administrative space can be accomplished through the purchase of land that can be developed into a master planned campus. The current financial landscape can make this proposal seem daunting; however, the land can be acquired on a cost-neutral basis. Through divestiture of certain state-owned properties and from future funds made available by the expiration of leases, the state could have the funding to purchase a site that is better suited to governmental agencies' needs.

### **Conclusion**

Texas would benefit greatly from the creation of a master planned campus to house state agencies. A government center that is designed as a master planned campus will enable state agencies to function in a more adequate manner and will address the pending concerns about the size, quality and utilization of the facilities needed to conduct the activities of the state.

### **Summary of Recommendations**

1. The Committee recommends that the Texas Facilities Commission continue to examine and develop the concept of a master planned campus for Texas state agencies and study all potential locations that may be accessible to a future government center.
2. The Committee recommends divestiture of state buildings within Travis County that are underutilized, operationally insufficient and no longer cost-effective.
3. The Committee recommends that the Texas Facilities Commission and the General Land Office consider input from state employees in a public setting to identify solutions for potential transportation, environment, and quality of life

issues associated with the selection of a parcel of land for a potential master planned campus.

4. The Committee recommends that if the state chooses to develop a master planned campus, all buildings on the campus should be built to high standards for energy and water efficiency, site selection, and reuse of construction materials. The state should also consider utilizing on site electricity generation from clean energy sources.
5. The Committee recommends that possible business implications are examined by the Texas Facilities Commission and the General Land Office in relation to the selection of a parcel of land for a potential master planned campus.

---

<sup>1</sup> U.S. Environmental Protection Agency, *Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States* (2006), available at [http://www.epa.gov/cleanenergy/documents/gta/guide\\_action\\_chap5\\_s1.pdf](http://www.epa.gov/cleanenergy/documents/gta/guide_action_chap5_s1.pdf); State Energy Conservation Office, "LoanSTAR Revolving Loan Program," available at <http://www.seco.cpa.state.tx.us/lr.htm>.

<sup>2</sup> *Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States* (2006), available at [http://www.epa.gov/cleanenergy/documents/gta/guide\\_action\\_chap5\\_s1.pdf](http://www.epa.gov/cleanenergy/documents/gta/guide_action_chap5_s1.pdf); State Energy Conservation Office, "LoanSTAR Revolving Loan Program," available at <http://www.seco.cpa.state.tx.us/lr.htm>.

<sup>3</sup> American Council for an Energy Efficient Economy, *Potential for Energy Efficiency Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs* (March 2007), available at <http://www.aceee.org/pubs/e073.htm>.

<sup>4</sup> State Energy Conservation Office, "State Energy Conservation Programs," available at <http://www.seco.cpa.state.tx.us/programs/>; "Building Codes and Standards," available at [http://www.seco.cpa.state.tx.us/sa\\_codes.html](http://www.seco.cpa.state.tx.us/sa_codes.html); "Energy News and Events," available at [http://www.seco.cpa.state.tx.us/seco\\_news.htm](http://www.seco.cpa.state.tx.us/seco_news.htm).

<sup>5</sup> "Energy Education Curriculum Program," available at [http://www.seco.cpa.state.tx.us/energy-ed\\_curriculum.htm#curriculum](http://www.seco.cpa.state.tx.us/energy-ed_curriculum.htm#curriculum).

<sup>6</sup> Governor's Competitiveness Council (July 2008), *2008 Texas State Energy Plan*, available at [http://governor.state.tx.us/files/gcc/2008\\_Texas\\_State\\_Energy\\_Plan.pdf](http://governor.state.tx.us/files/gcc/2008_Texas_State_Energy_Plan.pdf).

<sup>7</sup> Public Utility Commission of Texas, *A Report on Advanced Electric Metering as Required by House Bill 2129* (September 2008), available at [http://www.puc.state.tx.us/electric/projects/34610/Commission\\_Report\\_on\\_Advanced\\_Metering\\_2008.pdf](http://www.puc.state.tx.us/electric/projects/34610/Commission_Report_on_Advanced_Metering_2008.pdf).

<sup>8</sup> This program was funded in the 2006-2007 biennium, but was not funded in 2008-2009.

<sup>9</sup> Information on SECO's current Pollution Mitigation Program is available at <http://www.seco.cpa.state.tx.us/pollution.htm>.

<sup>10</sup> American Lung Association, *State of the Air Report* (2008), available at <http://www.lungusa2.org/sota/SOTA2008.pdf>.

<sup>11</sup> Environmental Protection Agency, *Clean Energy Options for Addressing High Electric Demand Days* (September 2008), available at [http://www.epa.gov/cleanenergy/documents/hedd\\_clean\\_energy\\_options.pdf](http://www.epa.gov/cleanenergy/documents/hedd_clean_energy_options.pdf).

<sup>12</sup> State Energy Conservation Office, "Texas Energy Partnership SB 12/HB 3693 Compliance," available at <http://www.seco.cpa.state.tx.us/sb5compliance.htm>.

<sup>13</sup> The National Consortium for Justice Information and Statistics, SEARCH, *Report of The National Task Force on the Criminal Backgrounding of America*, 1 (2005), available at <http://www.search.org/files/pdf/ReportofNTFCBA.pdf>.

<sup>14</sup> Ileana Barboza, State Auditor's Office, *Criminal Background Check Hearing Before the Senate Committee on Government Organization* (October 27, 2008).

<sup>15</sup> State Auditor's Office, *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, 1 (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.

<sup>16</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, 1 (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.

<sup>17</sup> Texas Department of Public Safety, *A Brief Guide to the Texas Computerized Criminal History System (CCH)*, available at [https://records.txdps.state.tx.us/DPS\\_WEB/Cch/index.aspx?PageIndex=About](https://records.txdps.state.tx.us/DPS_WEB/Cch/index.aspx?PageIndex=About).

<sup>18</sup> *A Brief Guide to the Texas Computerized Criminal History System (CCH)*, available at [https://records.txdps.state.tx.us/DPS\\_WEB/Cch/index.aspx?PageIndex=About](https://records.txdps.state.tx.us/DPS_WEB/Cch/index.aspx?PageIndex=About).

<sup>19</sup> *Report of The National Task Force on the Criminal Backgrounding of America*, 3 (2005), available at <http://www.search.org/files/pdf/ReportofNTFCBA.pdf>.

<sup>20</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, iii (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.

<sup>21</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, iii (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.

<sup>22</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, 11 (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>. See also The National Consortium for Justice Information and Statistics, SEARCH, *Report of The National Task Force on the Criminal Backgrounding of America*, 9 (2005), available at <http://www.search.org/files/pdf/ReportofNTFCBA.pdf> ("Ideally, only fingerprint-based checks would be performed.")

- 
- <sup>23</sup> U.S. Department of Justice, *The Attorney General's Report on Criminal Background Checks*, 3 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>24</sup> David Gavin, Department of Public Safety, *Criminal Background Check Hearing Before the Senate Committee on Government Organization* (October 27, 2008); phone interview with Timothy Braaten, Executive Director, Texas Commission on Law Enforcement Officer Standards and Education by Chairman Rodney Ellis' staffer E. Joyce Iyamu (November 2008).
- <sup>25</sup> *Report of The National Task Force on the Criminal Backgrounding of America*, 4 (2005), available at <http://www.search.org/files/pdf/ReportofNTFCBA.pdf>.
- <sup>26</sup> *The Attorney General's Report on Criminal Background Checks*, 2 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>27</sup> Robert T. Garrett, *Counties fail to update cases in state's crime database*, DALLAS MORNING NEWS, August 22, 2008.
- <sup>28</sup> Questionnaire provided by Erica Stick, External Relations, Texas Health and Human Services Commission (November 17, 2008).
- <sup>29</sup> Questionnaire, Texas Health and Human Services Commission (November 17, 2008).
- <sup>30</sup> Questionnaire, Texas Health and Human Services Commission (November 17, 2008). (DSHS professional licensing includes Advisory Board of Athletic Trainers, Chemical Dependency Counseling, Code Enforcement Officers, Texas Board of Examiners of Dietitians, and Contact Lens Dispensers).
- <sup>31</sup> HHSC also pointed out that criminal background checks are conducted on information technology employees assigned to certain divisions, including the Department of Assistive and Rehabilitation Services (DARS), the Department of Family and Protective Services (DFPS), a state school with the Department of Aging and Disability Services (DADS), or a state hospital with the Department of State Health Services (DSHS).
- <sup>32</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, 7 (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.
- <sup>33</sup> Questionnaire provided by Timothy A. Braaten, Executive Director, Texas Commission on Law Enforcement Officer Standards and Education (November 14, 2008).
- <sup>34</sup> Questionnaire provided by Doug Phillips, Investigations - Educator Certification Division, Texas Education Agency (November 14, 2008).
- <sup>35</sup> *An Audit Report on Agencies' and Higher Education Institutions' Background Check Procedures*, 10 (March 2008), available at <http://www.sao.state.tx.us/reports/main/08-024.pdf>.
- <sup>36</sup> *The Attorney General's Report on Criminal Background Checks*, 21 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>37</sup> *The Attorney General's Report on Criminal Background Checks*, 6 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>38</sup> *The Attorney General's Report on Criminal Background Checks*, 17 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>39</sup> *The Attorney General's Report on Criminal Background Checks*, 27 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>40</sup> *The Attorney General's Report on Criminal Background Checks*, 24 (June 2006), available at [http://www.usdoj.gov/olp/ag\\_bgchecks\\_report.pdf](http://www.usdoj.gov/olp/ag_bgchecks_report.pdf)
- <sup>41</sup> Presentation by William Kuntz, Executive Director, *Texas Department of Licensing and Regulation Presentation to the Senate Committee on Government Organization* (October 27, 2008).
- <sup>42</sup> The guidelines are published in the Texas Register 11018-11025 (December 5, 2003).
- <sup>43</sup> Kuntz, *Texas Department of Licensing and Regulation Presentation to the Senate Committee on Government Organization* (October 27, 2008).
- <sup>44</sup> The Reentry Policy Council (RPC) is a national project coordinated by the Council of State Governments Justice Center. It was established in 2001 to assist state government officials who were dealing with increasing numbers of people re-entering communities from prisons and jails. See the vast amount of resources available from the Reentry Policy Council at <http://reentrypolicy.org>.
- <sup>45</sup> The American Bar Association's Commission on Effective Criminal Sanctions held hearings around the country to examine best state practices in reducing collateral consequences of criminal convictions. The ABA has endorsed many of their policy recommendations. See <http://www.abanet.org/dch/committee.cfm?com=CR209800>.
- <sup>46</sup> See the National Conference of Commissioners on Uniform State Laws' 2008 draft of its Uniform Act on Collateral Consequences of Conviction at [http://www.law.upenn.edu/bll/archives/ulc/ucsada/2008\\_amdraft.htm](http://www.law.upenn.edu/bll/archives/ulc/ucsada/2008_amdraft.htm).
- <sup>47</sup> See the Reentry Policy Council's summary of the Second Chance Act at [http://reentrypolicy.org/government\\_affairs/second\\_chance\\_act](http://reentrypolicy.org/government_affairs/second_chance_act).
- <sup>48</sup> Marc Levin, *Working with Conviction: Criminal Offenses as Barriers to Entering Licensed Occupations in Texas*, Texas Public Policy Foundation (November 2007).
- <sup>49</sup> *As Texas's Prison Population Experiences Five-Fold Growth Since 1980, Urban Centers Contend with Influx of Former Inmates*, Urban Institute (March 19, 2004).
- <sup>50</sup> *Rothgery v. Gillespie County, Texas* Docket No. 07-440.
- <sup>51</sup> Press Release, Texas Fair Defense Project, U.S. Supreme Court Rebukes Texas for Denying Indigent Defendants the Right to Counsel (June 23, 2008).
- <sup>52</sup> Levin, 4.
- <sup>53</sup> Levin, 7 (citing Kurlychek et al, *Enduring Risk? Old Criminal Records and Short-Term Predictions of Criminal Involvement*, CRIME & DELINQUENCY, Vol. 53, No. 1, 64-83 (2007)).



- 
- <sup>54</sup> Florida Governor's Ex-Offender Task Force, *Final Report of the Governor's Ex-Offender Task Force*, 4 (November 2006).
- <sup>55</sup> Phone interview with Vicki Lopez Lukis, Chairman of Governor's Ex-Offender Task Force by Chairman Rodney Ellis' staffer, Scott Ehlers (November 18, 2008).
- <sup>56</sup> *Open Standard Open Source Open Format: An Introduction*, Texas Department of Information Resources (June 2008).
- <sup>57</sup> Presentation to Senate Committee on Government Organization, Open Document Alliance (October 27, 2008).
- <sup>58</sup> *Open Standard Open Source Open Format: An Introduction*, Texas Department of Information Resources (June 2008).
- <sup>59</sup> Letter from Ginger Salone, Deputy Executive Director, Statewide Technology Service Delivery, Department of Information Resources, to Senator Rodney Ellis, Chairman, Senate Committee on Government Organization (November 14, 2008).
- <sup>60</sup> Letter from Brian Rawson, Chief Technology Office, to Senator Mario Gallegos (May 14, 2008) (responding to a request for information relating to adopting an open document format for state-created documents).
- <sup>61</sup> Letter from Salone to Senator Ellis (November 14, 2008).
- <sup>62</sup> ODF Government Adoptions, Open Document Alliance, available at <http://www.odfalliance.org/resources/Adoptions-ODF-Aug2008.pdf>.
- <sup>63</sup> ODF Government Adoptions, Open Document Alliance, available at <http://www.odfalliance.org/resources/Adoptions-ODF-Aug2008.pdf>.
- <sup>64</sup> Letter from Salone to Senator Ellis (November 14, 2008).
- <sup>65</sup> Letter from Salone to Senator Ellis (November 14, 2008).
- <sup>66</sup> Gopal Khanna, Chief Information Officer, Minnesota, *Preserving the Present: Creating, accessing and maintaining Minnesota's electronic documents*, Minnesota Office of Enterprise Technology Report to the Minnesota Legislature (January 15, 2008).
- <sup>67</sup> *Building an energy-efficient America: Zero energy and high efficiency buildings*, Environment America Research & Policy Center (May 2008), available at <http://www.environmentamerica.org/uploads/kx/lm/kxlmeu7IzctnMBnd2AZJQg/AME-efficiency.v6.pdf>.
- <sup>68</sup> Austin Energy, Green Building program, available at <http://www.austinenenergy.com/energy%20efficiency/programs/green%20building/About%20Us/index.htm>.
- <sup>69</sup> San Antonio Sets Green Building Guidelines, U.S. Department of Energy, (June 2007), available at [http://apps1.eere.energy.gov/state\\_energy\\_program/project\\_brief\\_detail.cfm/pb\\_id=1150](http://apps1.eere.energy.gov/state_energy_program/project_brief_detail.cfm/pb_id=1150).
- <sup>70</sup> Press release, American Council for an Energy Efficient Economy, Maryland legislation taps energy efficiency as the "first fuel" (April 2008), available at <http://www.aceee.org/press/0804maryland.htm>.
- <sup>71</sup> *IPCC WGIII Assessment Report: Chapter 6. Mitigation options in buildings*, presentation by Mark D. Levine, Lawrence Berkeley National Laboratory, & Diana Ürge-Vorsatz, Central European University (Nov. 2007), available at <http://txspace.tamu.edu/bitstream/handle/1969.1/6322/ESL-IC-07-11-46.pdf?sequence=1>.
- <sup>72</sup> *State of The Air: 2007*, American Lung Association, available at [http://lungaction.org/reports/sota07\\_cities.html](http://lungaction.org/reports/sota07_cities.html).
- <sup>73</sup> Statistics on outdoor air pollution, Environmental Health Houston, available at [www.envirohealthhouston.org/concerns/index.html](http://www.envirohealthhouston.org/concerns/index.html) (website is the collaborative project of many organizations, including Baylor College of Medicine and the National Institute of Environmental Health Sciences); data on pollution and heart disease, American Heart Association, available at <http://www.americanheart.org/presenter.jhtml?identifier=4419>; David Ivanovich & Dina Cappiello, Air-toxics risk study sought in energy bill, *HOUSTON CHRONICLE* (July 28, 2005).
- <sup>74</sup> Statistics on asthma, Environmental Protection Agency, available at <http://www.epa.gov/asthma/about.html>.
- <sup>75</sup> *From Policy to Reality: Maximizing Urban Water Conservation in Texas*, Environmental Defense Fund (2008), available at [www.edf.org/documents/7789\\_Texas\\_Water\\_Pub\\_08.pdf](http://www.edf.org/documents/7789_Texas_Water_Pub_08.pdf).
- <sup>76</sup> *Potential for Energy Efficiency Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs*, American Council for an Energy Efficient Economy (ACEEE) (March 2007), available at <http://www.aceee.org/pubs/e073.htm>.
- <sup>77</sup> *From Policy to Reality: Maximizing Urban Water Conservation in Texas*, Environmental Defense Fund (2008), available at [www.edf.org/documents/7789\\_Texas\\_Water\\_Pub\\_08.pdf](http://www.edf.org/documents/7789_Texas_Water_Pub_08.pdf).
- <sup>78</sup> *High Performance Building Delivers Results* Urban Consortium Energy Task Force of Public Technology, Inc. (Dec. 2000), available at [www.ci.seattle.wa.us/light/conservesustainability/SDPFRa.pdf](http://www.ci.seattle.wa.us/light/conservesustainability/SDPFRa.pdf).
- <sup>79</sup> *From Policy to Reality: Maximizing Urban Water Conservation in Texas*, Environmental Defense Fund (2008), available at [www.edf.org/documents/7789\\_Texas\\_Water\\_Pub\\_08.pdf](http://www.edf.org/documents/7789_Texas_Water_Pub_08.pdf).
- <sup>80</sup> *Reducing U.S. Greenhouse Gas Emissions: How much at what cost?*, US Greenhouse Abatement Mapping Initiative Executive Report, McKinsey & Co. (2007), available at [www.mckinsey.com/client/service/ccsi/pdf/US\\_ghg\\_final\\_report.pdf](http://www.mckinsey.com/client/service/ccsi/pdf/US_ghg_final_report.pdf); *Building an energy-efficient America: Zero energy and high efficiency buildings*, Environment America Research & Policy Center (May 2008), available at <http://www.environmentamerica.org/uploads/kx/lm/kxlmeu7IzctnMBnd2AZJQg/AME-efficiency.v6.pdf>.
- <sup>81</sup> Continuous Commissioning overview, Texas A&M System Energy Systems Lab, available at <http://esl.eslwin.tamu.edu/continuous-commissioning.html>.
- <sup>82</sup> *Potential for Energy Efficiency Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs*, American Council for an Energy Efficient Economy (ACEEE) (March 2007), available at <http://www.aceee.org/pubs/e073.htm>.
- <sup>83</sup> Texas Commission on Environmental Quality, "Reclaimed and Reused" [http://www.tceq.state.tx.us/comm\\_exec/forms\\_pubs/pubs/pd/020/04-01/reclaimed.html](http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/pd/020/04-01/reclaimed.html).
- <sup>84</sup> *Reducing U.S. Greenhouse Gas Emissions: How much at what cost?*, US Greenhouse Abatement Mapping Initiative Executive Report, McKinsey & Co. (2007), available at [www.mckinsey.com/client/service/ccsi/pdf/US\\_ghg\\_final\\_report.pdf](http://www.mckinsey.com/client/service/ccsi/pdf/US_ghg_final_report.pdf).
- <sup>85</sup> *2030 Implementation Guidelines*, Architecture 2030, available at <http://www.architecture2030.org/pdfs/2030ImplementationGuidelines.pdf>.
- <sup>86</sup> *Building an energy-efficient America: Zero energy and high efficiency buildings*, Environment America Research & Policy Center (May 2008), available at <http://www.environmentamerica.org/uploads/kx/lm/kxlmeu7IzctnMBnd2AZJQg/AME-efficiency.v6.pdf>.

---

<sup>87</sup> *Potential for Energy Efficiency Demand Response, and Onsite Renewable Energy to Meet Texas's Growing Electricity Needs*, American Council for an Energy Efficient Economy (ACEEE) (March 2007), available at <http://www.aceee.org/pubs/e073.htm>.

<sup>88</sup> Information provided by Mr. Edward Johnson, Executive Director, Texas Facilities Commission.

<sup>89</sup> Information provided by Johnson, Texas Facilities Commission.

<sup>90</sup> Information provided by Johnson, Texas Facilities Commission.

<sup>91</sup> Information provided by Johnson, Texas Facilities Commission.

<sup>92</sup> Information provided by Johnson, Texas Facilities Commission.



# Examples of Criminal Background Checks

Electricians	
154,000	original and renewal electrician applications processed
21,560	number of applicants with a criminal conviction (14%)
4,620	applicants referred to Enforcement Division (3%)
4,046	number of cases opened by Enforcement Division
634	denial and revocation notices issued (less than 1/2%)
519	total number of licenses, denied, revoked or surrendered due to a criminal conviction (0.33%)

Barbers	
8,185	original and renewal barber applications processed
373	number of applicants with a criminal conviction (3%)
23	applicants referred to Enforcement Division (0.28%)
13	number of cases opened by Enforcement Division (0.16%)
5	denial and revocation notices issued (0.06%)
3	total number of licenses, denied, revoked or surrendered due to a criminal conviction (0.04%)

### Why does TDLR need to perform criminal background checks on barbers and electricians?

Under Texas law in Chapter 53 of the Texas Occupations Code, TDLR, like all other licensing agencies, has the authority to deny an application for licensure if it finds that the applicant has been convicted of a felony or misdemeanor that directly relates to the duties and responsibilities of the licensed occupation. TDLR is required by Chapter 53 to develop criminal conviction guidelines relating to each of the occupations that it licenses, to guide it in determining which crimes directly relate to the licensed occupation.

### Who decides which crimes relate to a particular occupation?

In the case of the barbers and electricians, TDLR has relied on the input of its advisory boards, to make recommendations regarding which criminal convictions directly relate to the respective occupational license. The advisory boards proposed the following: 1) crimes involving prohibited sexual conduct or involving children as victims; 2) crimes against a person i.e. Homicide, kidnapping or assault; and 3) crimes involving illegal manufacture or delivery of a controlled substance (barbers only). The advisory boards' recommendations are provided to the Texas Commission of Licensing and Regulation to make a final decision on which crimes directly relate to each occupation.

### Do the guidelines prohibit anyone who has been convicted of violent crime or sexual assault from becoming a barber or electrician?

No. A conviction in these areas will trigger a case by case review of the applicant's criminal history based on the following statutory criteria: 1) the extent and nature of the person's past criminal activity; 2) the age of the applicant when the crime was committed; 3) the amount of time that has elapsed since the person's last criminal activity; 4) the conduct and work activity of the person before and after the criminal activity; 5) evidence of the person's rehabilitation or rehabilitative effort while incarcerated or after release; and 6) other evidence of the person's fitness, including letters of recommendation. Texas Occupations Code §53.023.

### Common convictions leading to license denial/revocation:

- Sex cases (including Sexual Assault, Indecency with a Child, Indecent Exposure, Possession of Child Pornography, etc)
- Burglary (of habitations, businesses and vehicles)
- Assaults, both felony and misdemeanor (including robbery and murder)
- Thefts, both felony and misdemeanor
- Fraud crimes (such as Forgery, Misapplication of Fiduciary Property, Securing Execution of Document by Deception)



## *Background for TDLR's Criminal Conviction Review Process*

Chapter 53 of the Occupations Code provides authority for licensing agencies to deny licenses on the basis of criminal convictions that directly relate to the licensed occupation. See Occupations Code § 53.021(a): “A licensing authority may suspend or revoke a license, disqualify a person from receiving a license, or deny to a person the opportunity to take a licensing examination on the grounds that the person has been convicted of a felony or misdemeanor that directly relates to the duties and responsibilities of the licensed occupation.” See also § 53.021(b), which requires license revocation when a person is incarcerated following a felony conviction.

Occupations Code §§ 53.022 and 53.023 set out factors for the licensing agency to consider in determining whether a particular crime warrants license denial. Those factors include the nature and seriousness of the crime, the extent to which a license might offer an opportunity to engage in further criminal activity of the same type, the age of the person when the crime was committed, and evidence of the person's subsequent rehabilitative effort.

Occupations Code § 53.025 mandates that each licensing agency issue its own guidelines “relating to the practice of the licensing authority under this chapter” and stating “the reasons a particular crime is considered to relate to a particular license and any other criterion that affects the decisions of the licensing authority.” This section requires that an agency's guidelines be filed with the Secretary of State for publication in the *Texas Register*.

In the fall of 2003, TDLR prepared criminal conviction guidelines stating, as to each type of license issued by TDLR, the reasons why particular crimes are considered to relate to the license. In developing the guidelines, staff relied heavily upon guidance from TDLR's advisory boards and the Commission of Licensing and Regulation (“the Commission”). The Commission gave its final approval of the guidelines on October 28, 2003, and the guidelines were published in the *Texas Register* on December 5, 2003. See 28 *Texas Register* 11018 – 11025.

More recently, the Commission approved and the Department published criminal conviction guidelines for the Barber, Cosmetologist, Towing, and Vehicle Storage Facility industries.



## *TDLR's Process for Evaluating Criminal Convictions*

Most individual license applications require the applicant to provide information about criminal convictions. TDLR's Licensing Division also runs a criminal background check through the Department of Public Safety (DPS) on each original license application and a sample of all renewal applications filed. If the application or the DPS check reveals a conviction that could be a basis for denying the license, the Licensing staff will refer the matter to TDLR's Enforcement Division for further review. The entire application packet is forwarded, including the completed application form, all attachments, all related correspondence, and the report obtained from DPS.

Upon receipt of an application referral in the Enforcement Division, the matter is immediately assigned to an attorney for review. The attorney treats these referrals as high priority, and reviews the criminal conviction with reference to the applicable statutory provisions and these guidelines. The attorney is expected to complete this initial review within three (3) days. If the attorney determines that the license should not be denied on the basis of the criminal conviction, then the attorney immediately returns the application and related materials to the Licensing Division, with a memorandum stating his conclusion.

If the attorney determines that the license should possibly be denied due to the criminal conviction, the attorney enlists the aid of an investigator, who secures certified copies of the relevant criminal convictions, interviews the applicant, and gathers any other information deemed necessary. A letter of proposed license denial is then mailed to the applicant. The letter clearly identifies the convictions that form the basis of the proposed denial, cites the statutory authority for the proposed denial, and advises the applicant that a hearing may be requested to challenge the proposed denial.

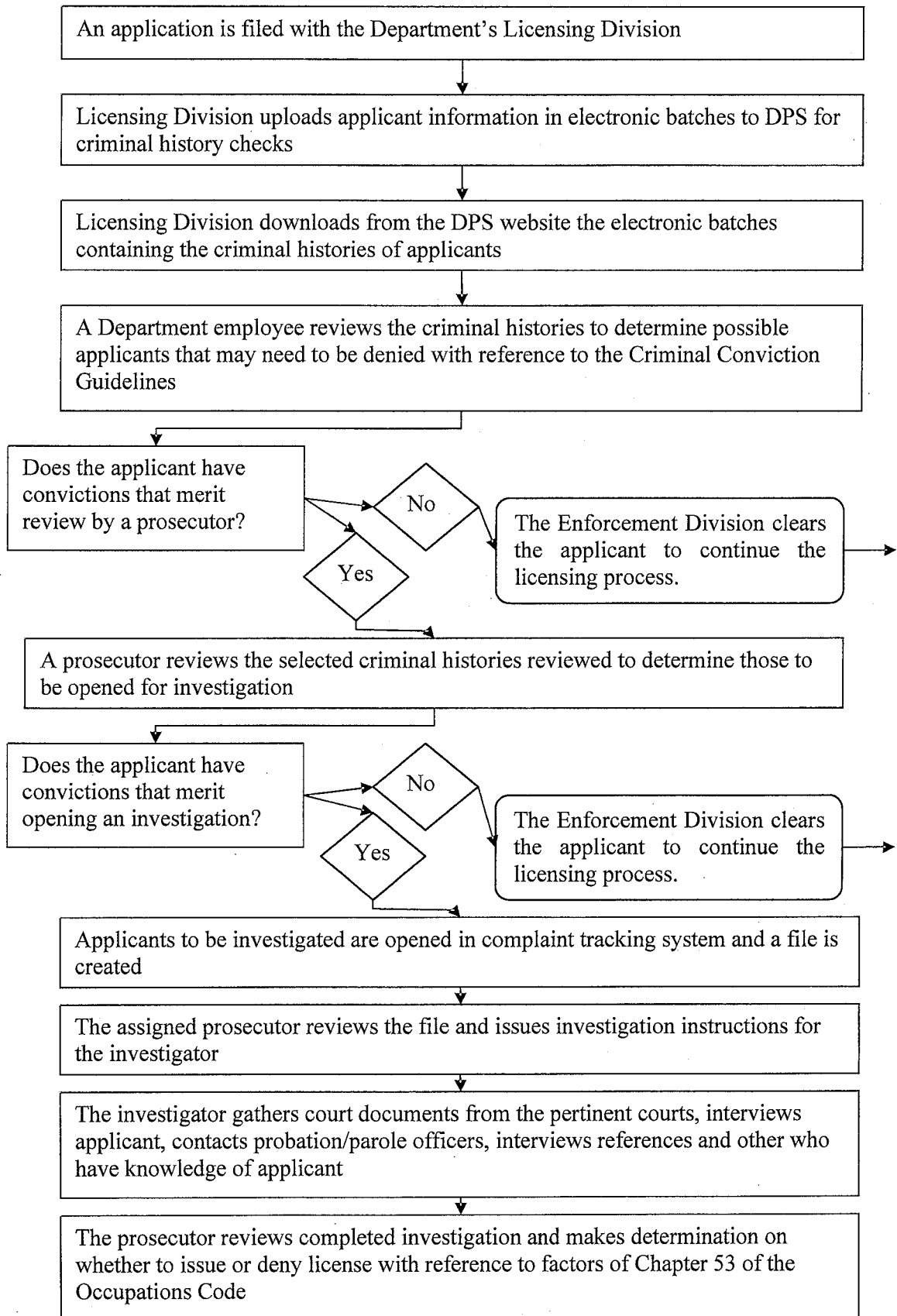
If an applicant requests a hearing on the proposed license denial, the request is immediately forwarded to the prosecuting attorney. The attorney schedules a hearing on the nearest available date, and issues a Notice of Hearing to the applicant. After a hearing is conducted, the Administrative Law Judge issues a Proposal for Decision for consideration by the Commission of Licensing and Regulation. After considering the Proposal for Decision, the Commission may grant or deny the license.

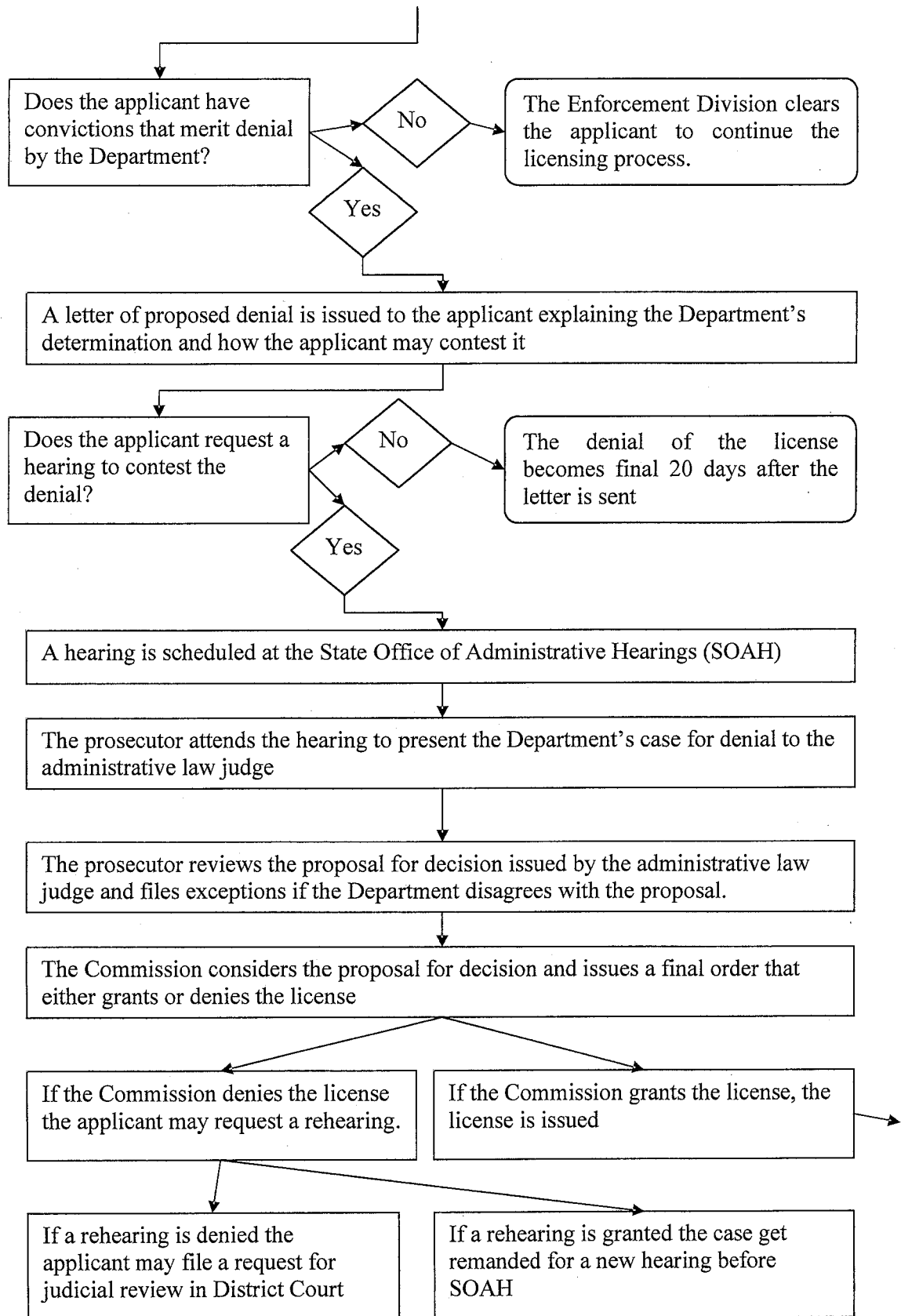
If the applicant does not request a hearing or otherwise respond to the letter of proposed license denial, the license denial becomes final 20 days after the letter was issued.

For individuals who are already licensed when the agency discovers a criminal conviction, the process is essentially the same as that described above. A conviction discovered by Licensing staff, an Enforcement investigator, or any other agency employee is referred to the Enforcement Division. If the Enforcement attorney finds, after investigation, that the conviction warrants license suspension or revocation, a letter of proposed license suspension or revocation is issued to the license holder. If the license holder requests a hearing, a hearing is conducted, a Proposal for Decision is issued for consideration by the Commission, and the Commission ultimately decides whether the license should be revoked due to the criminal conviction.



# TDLR Enforcement Division Criminal Review Process







## *Factors Considered by the Agency in Evaluating Criminal Convictions*

Chapter 53 of the Occupations Code establishes three sets of factors that must be considered by the agency when evaluating an applicant's criminal history.

### **The Conviction Itself:**

In determining whether a criminal conviction directly relates to an occupation and therefore should be grounds to deny a license, the following factors are considered in all cases. See Section 53.022 of the Occupations Code.

1. The nature and seriousness of the crime;
2. the relationship of the crime to the purposes for requiring a license to engage in the occupation;
3. the extent to which a license might offer an opportunity to engage in further criminal activity of the same type as that in which the applicant previously had been involved; and
4. The relationship of the crime to the ability, capacity, or fitness required to perform the duties and discharge the responsibilities of the licensed occupation.

### **Fitness to Hold the License:**

In determining the applicant's fitness to perform the duties and discharge the responsibilities of the licensed occupation of a person who has been convicted of a crime, the agency will also consider the following factors. See Section 53.023(a) of the Occupations Code.

1. The extent and nature of the person's past criminal activity;
2. the age of the person when the crime was committed;
3. the amount of time that has elapsed since the person's last criminal activity;
4. the conduct and work activity of the person before and after the criminal activity;
5. evidence of the person's rehabilitation or rehabilitative effort while incarcerated or after release; and
6. other evidence of the person's fitness, including letters of recommendation from:
  - (A) prosecutors and law enforcement and correctional officers who prosecuted, arrested, or had custodial responsibility for the person;
  - (B) the sheriff or chief of police in the community where the person resides; and
  - (C) any other person in contact with the convicted person.

### **Responsibilities of the Applicant:**

The applicant has the responsibility, to the extent possible, to obtain and provide to the agency the recommendations of the prosecution, law enforcement, and correctional authorities as described above. The applicant has the further obligation to furnish proof in the form required by the agency that the applicant has complied with the responsibilities described below. See Section 53.023(b) of the Occupations Code.

1. maintained a record of steady employment;
2. supported the applicant's dependents;
3. maintained a record of good conduct; and
4. paid all outstanding court costs, supervision fees, fines, and restitution ordered in any criminal case in which the applicant has been convicted.





# Criminal History Evaluation Statistics for Fiscal Years 2007 and 2008

## FISCAL YEAR 2007

PROGRAM	TOTAL LICENSES ISSUED AND RENEWED	APPLICATIONS REFERRED TO ENFORCEMENT	% REFERRED	CASES OPENED	APPLICATIONS DENIED/ REVOKED	% DENIED/ REVOKED
Air Conditioning and Refrigeration	12,238	48	.39	22	1	.01
Barbers	7,796	43	.55	31	2	.03
Cosmetologists	101,148	107	.11	61	3	.003
Electricians	96,410	4,415	4.58	1,243	177	.18
Legal Service Contracts	15,853	53	.33	25	3	.02
Water Well Drillers	1,990	13	.65	6	1	.05
<b>TOTAL</b>	<b>233,433</b>	<b>4,679</b>		<b>1,388</b>	<b>187</b>	

## FISCAL YEAR 2008

PROGRAM	TOTAL LICENSES ISSUED AND RENEWED	APPLICATIONS REFERRED TO ENFORCEMENT	% REFERRED	CASES OPENED	APPLICATIONS DENIED/ REVOKED	% DENIED/ REVOKED
Air Conditioning and Refrigeration	24,869	1,640	6.59	405*	7	.03
Auctioneers	1,996	3	.15	3	0	-----
Barbers	8,985	106	1.18	85	2	.02
Combative Sports	1,650	20	1.21	5	3	.18
Cosmetologists	108,580	24	.02	96	74	.07
Electricians	99,525	5,086	5.11	1,996	200	.20
Legal Service Contracts	14,107	56	.40	34	3	.02
Property Tax Consultants	1,385	1	.07	1	1	.07
Registered Accessibility Specialists (AB)	405	4	.99	1	0	-----
Staff Leasing Services	319	1	.31	1	0	-----
Towing Operators	5,760	1,113	19.32	365*	0	-----
Vehicle Storage Facilities	3,644	430	11.80	123*	0	-----
Water Well Drillers	3,013	28	.93	15	2	.07
<b>TOTAL</b>	<b>274,238</b>	<b>8,512</b>		<b>3,130</b>	<b>292</b>	

\*Most of these cases were opened at the end of Fiscal Year 2008 and are pending resolution in Enforcement.



# *Criminal Conviction Background Review Process*

## *Best Practices and Recommendations*

### **Best Practices**

1. Clear criminal conviction guidelines stating the reasons a particular crime is considered to relate to the practice in a particular license occupation.
2. Publication of these criminal conviction guidelines in the Texas Register and on the agency web page. The guidelines should include the following:
  - a. The specific crimes that will trigger a closer review of an applicant's criminal history
  - b. The specific criteria that the agency will utilize in the evaluation of the an applicant's criminal history, consistent with the factors listed in Chapter 53 of the Occupations Code
  - c. An overview of the agency's process for evaluating an applicant's criminal history
3. Consumer outreach to explain the agency's criminal history evaluation process to prospective applicants – in trade schools, prisons and at job and trade shows
4. Development of Criminal Conviction Questionnaires to be completed by the applicant. This questionnaire provides valuable information that can expedite the evaluation of an applicant's criminal history.
5. A tiered approach to evaluating an applicant's criminal history record, wherein the criminal history is reviewed by multiple individuals before a decision is made to deny a license.
6. A case-by-case approach to the decision-making process. No automatic bars to licensing based on specific crimes. Case-by-case analysis of the crime itself, information provided in court documents, information provided by the applicant and applicant's references, and information provided by probation officers and parole officers. Review of all information in light of the factors set out in Chapter 53 of the Occupations Code.
7. Notice to the applicant and an opportunity for a hearing on a proposed denial of a license.
8. Provide a temporary license to allow for fast track application processing for applicants that indicate that they do not have a criminal conviction.

### **Recommendations**

1. Provide the opportunity for a prospective applicant with a criminal history to apply for pre-screening; similar to the Texas Real Estate Commission's Moral Character Determination process.
  - a. This would allow an applicant, prior to expending time and money enrolling in school, scheduling an exam or filing for a license, to know whether or not their prior criminal conviction(s) would likely prevent them from being licensed.
2. Examine the current cost structure for agencies accessing criminal history records. Currently, agencies (with a few exceptions) pay the Department of Public Safety \$1 for each applicant (original and renewal). In the case of TDLR which has more than 370,000 individual licensees (not including applicants that are denied) this is an expensive proposition.
  - a. Based on the facts that the criminal history records process is automated; that some agencies receive the information at a cost lower than \$1 per search; and that entire criminal history database is made available to the public at a lower cost leads us to believe that a review of the current cost structure is warranted.
3. Statutory authority to consider deferred adjudications as well as convictions. Preferably in Chapter 53.
4. Create a temporary license that allows for a fast track processing of applications for applicants that indicate they do not have a criminal conviction. Currently, the agency has a 21 day license authority for Air Conditioning and Refrigeration technicians and Electrical Apprentices. This temporary license has allowed the agency to meet the industry's need to have these individuals licensed quickly while preserving its ability to perform its criminal history evaluation.

## Executive summary

---

Consensus is growing among scientists, policy makers and business leaders that concerted action will be needed to address rising greenhouse gas (GHG) emissions. The discussion is now turning to the practical challenges of where and how emissions reductions can best be achieved, at what costs, and over what periods of time.

Starting in early 2007, a research team from McKinsey & Company worked with leading companies, industry experts, academics, and environmental NGOs to develop a detailed, consistent fact base estimating costs and potentials of different options to reduce or prevent GHG emissions within the United States over a 25-year period. The team analyzed more than 250 options, encompassing efficiency gains, shifts to lower-carbon energy sources, and expanded carbon sinks.

### THE CENTRAL CONCLUSION OF THIS PROJECT

*The United States could reduce greenhouse gas emissions in 2030 by 3.0 to 4.5 gigatons of CO<sub>2</sub>e using tested approaches and high-potential emerging technologies.<sup>1</sup> These reductions would involve pursuing a wide array of abatement options available at marginal costs less than \$50 per ton, with the average net cost to the economy being far lower if the nation can capture sizable gains from energy efficiency. Achieving these reductions at the lowest cost to the economy, however, will require strong, coordinated, economy-wide action that begins in the near future.*

Although our research suggests the net cost of achieving these levels of GHG abatement could be quite low on a societal basis, issues of timing and allocation would likely lead various stakeholders to perceive the costs very differently – particularly during the transition to a lower carbon economy. Costs will tend to concentrate more in some sectors than others, and involve “real” up-front outlays that would be offset by “avoided” future outlays. Given the timing of investments relative to savings, the economy might well encounter periods of significant visible costs, with the costs and benefits shared unequally among stakeholders. Nonetheless, a

1 CO<sub>2</sub>e, or “carbon dioxide equivalent,” is a standardized measure of GHG emissions designed to account for the differing global warming potentials of GHGs. Emissions are measured in metric tons CO<sub>2</sub>e per year, i.e., millions of tons (megatons) or billions of tons (gigatons). All emissions values in this report are per-year CO<sub>2</sub>e amounts, unless specifically noted otherwise. To be consistent with U.S. government forecasts, the team used the 100-year global warming potentials listed in the Intergovernmental Panel on Climate Change’s Second Assessment Report (1995).

concerted, nationwide effort to reduce GHG emissions would almost certainly stimulate economic forces and create business opportunities that we cannot foresee today and that may accelerate the rate of abatement the nation can achieve, thereby reducing the overall cost.

We hope that the fact base provided in this report will help policymakers, business leaders, academics and other interested parties make better informed decisions and develop economically sensible strategies to address the nation's rising GHG emissions.

### RISING EMISSIONS POSE AN INCREASING CHALLENGE

Annual GHG emissions in the U.S. are projected to rise from 7.2 gigatons CO<sub>2</sub>e in 2005 to 9.7 gigatons in 2030 – an increase of 35 percent – according to an analysis of U.S. government reference forecasts.<sup>2</sup> The main drivers of projected emissions growth are:

- ¶ Continued expansion of the U.S. economy
- ¶ Rapid growth in the buildings-and-appliances and transportation sectors, driven by a population increase of 70 million and rising personal consumption
- ¶ Increased use of carbon-based power in the electric-power generation portfolio, driven by projected construction of new coal-fired power plants without carbon capture and storage (CCS) technology.

Growth in emissions would be accompanied by a gradual decrease in the absorption of carbon by U.S. forests and agricultural lands. After rising for 50 years, carbon absorption is forecast to decline from 1.1 gigatons in 2005 to 1.0 gigatons in 2030.

*On this path – with emissions rising and carbon absorption starting to decline – U.S. emissions in 2030 would exceed GHG reduction targets contained in economy-wide climate-change bills currently before Congress by 3.5 to 5.2 gigatons.<sup>3</sup>*

2 The research team used the "reference" scenario in the U.S. Energy Information Administration's Annual Energy Outlook 2007 report as the foundation of its emissions reference case for emissions through 2030, supplementing that with data from Environmental Protection Agency and Department of Agriculture sources: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005; Global Anthropogenic non-CO<sub>2</sub> Greenhouse Gas Emissions: 1990-2020; Global Mitigation of non-CO<sub>2</sub> Greenhouse Gases; and Forest Service RMRS-GTR-59 (2000). Our analyses excluded HCFCs, which are being retired under the Montreal Protocol.

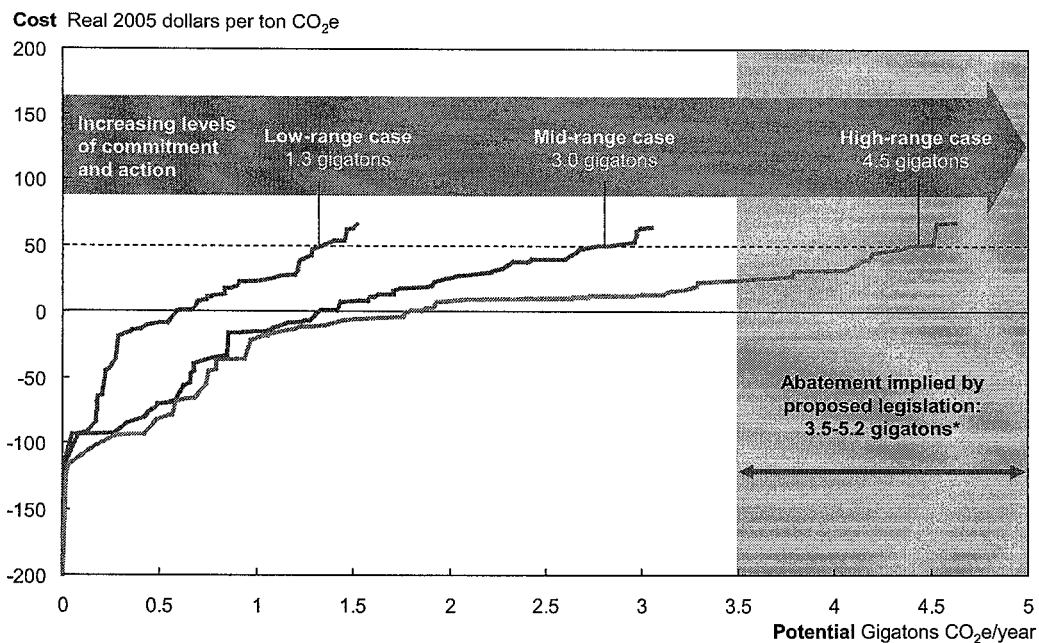
3 The research team defined an illustrative range of GHG reduction targets relative to the emissions reference case using a sampling of legislation that had been introduced in Congress at the time this report was written. The team focused on bills that address global warming and/or climate change on an economy-wide basis and contain quantifiable reduction targets. Use of these possible targets as reference points should not be construed as an endorsement of those targets nor the policy approaches contained in any particular legislative initiative.

## SIGNIFICANT POTENTIAL TO REDUCE U.S. EMISSIONS

We analyzed resource costs and abatement potentials for more than 250 opportunities to reduce or prevent GHG emissions.<sup>4</sup> We projected a range of three outcomes for each option and, for analytical purposes, integrated the values into three abatement supply curves. The supply curves are not optimized scenarios, rather they represent different approximations of national commitment (e.g., degree of incentives, investments, regulatory reforms, and urgency for action) and different rates for innovation, learning, and adoption of various technologies. We have called the three curves “cases”: the low-range case involves incremental departures from current (i.e., reference case) practices; the mid-range case involves concerted action across the economy; and the high-range case involves urgent national mobilization. In this way, the cases illustrate an envelope of abatement potential for the United States by 2030 (Exhibit A).<sup>5</sup>

Exhibit A

### U.S. GREENHOUSE GAS ABATEMENT POTENTIALS – 2030



\* Based on bills introduced in Congress that address climate change and/or GHG emissions on an economy-wide basis and have quantifiable targets; targets calculated off the 2030 U.S. GHG emissions of 9.7 gigatons CO<sub>2</sub>e/year (reference case)

Source: McKinsey analysis

- 4 The cost of an abatement option reflects its resource (or techno-engineering) costs – i.e., capital, operating, and maintenance costs – offset by any energy savings associated with abating 1 ton of CO<sub>2</sub>e per year using this option, with the costs/savings levelized over the lifetime of the option using a 7-percent real discount rate. We excluded transaction costs, communication/information costs, taxes, tariffs, and/or subsidies. We also have not assumed a “price for carbon” (e.g., a carbon cap or tax) that might emerge as a result of legislation, nor any impact on the economy of such a carbon price. Hence, the per-ton abatement cost does not necessarily reflect the total cost of implementing that option.
- 5 Only the high-range case reaches the target levels of GHG abatement (3.5 to 5.2 gigatons in 2030) suggested by our sampling of proposed federal legislation that addresses climate change on an economy-wide basis. For this reason, we focus most of our abatement analysis on the upper part of the envelope, from 3.0 gigatons (mid-range case) to 4.5 gigatons (high-range case).

*Relying on tested approaches and high-potential emerging technologies, the U.S. could reduce annual GHG emissions by as much as 3.0 gigatons in the mid-range case to 4.5 gigatons in the high-range case by 2030. These reductions from reference case projections would bring U.S. emissions down 7 to 28 percent below 2005 levels, and could be made at a marginal cost less than \$50 per ton,<sup>6</sup> while maintaining comparable levels of consumer utility.<sup>7</sup>*

We made no assumptions about specific policy approaches that might be taken – e.g., a carbon cap or tax, mandates, or incentives – nor responses in consumer demand that might result. Nonetheless, unlocking the full abatement potential portrayed in our mid- and high-range curves would require strong stimuli and policy interventions of some sort. *Without a forceful and coordinated set of actions, it is unlikely that even the most economically beneficial options would materialize at the magnitudes and costs estimated here.*

Our analysis also found that:

¶ **Abatement opportunities are highly fragmented and widely spread across the economy (Exhibit B).** The largest option (CCS for a coal-fired power plant) offers less than 11 percent of total abatement potential. The largest sector (power generation) only accounts for approximately one-third of total potential.

¶ **Almost 40 percent of abatement could be achieved at “negative” marginal costs,** meaning that investing in these options would generate positive economic returns over their lifecycle. The cumulative savings created by these negative-cost options could substantially offset (on a societal basis) the additional spending required for the options with positive marginal costs. Unlocking the negative cost options would require overcoming persistent barriers to market efficiency, such as mismatches between who pays the cost of an option and who gains the benefit (e.g., the homebuilder versus homeowner), lack of information about the impact of individual decisions, and consumer desire for rapid payback (typically 2 to 3 years) when incremental up-front investment is required.

¶ **Abatement potentials, costs, and mix vary across geographies.** Total abatement available at less than \$50 per ton ranges from 330 megatons in the Northeast to 1,130 megatons in the South (mid-range case). These potentials are roughly

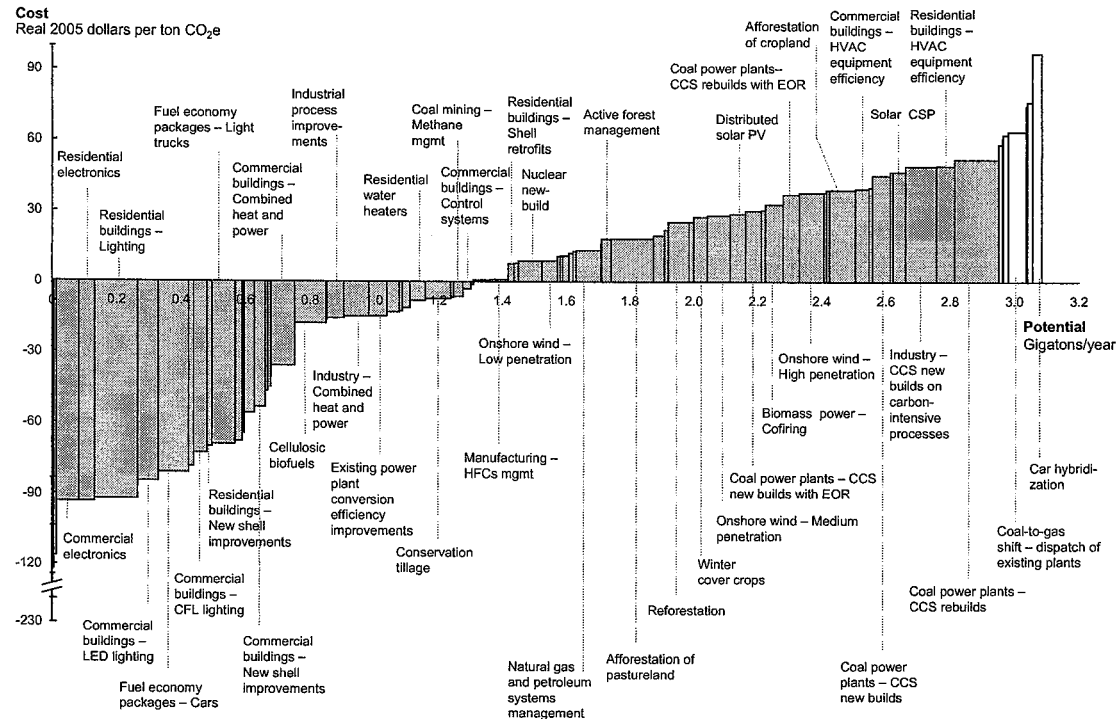
6 The team set an analytical boundary at \$50 per ton in marginal cost after considering consumer affordability and the estimated long-term cost for adding carbon capture and storage to an existing coal-fired power plant, a solution that, if successfully deployed, would likely set an important benchmark for emission-control costs. Abatement costs are expressed in 2005 real dollars. The team examined a number of options with marginal costs between \$50 and \$100 per ton, but did not attempt a comprehensive survey of options in this range. For simplicity of expression in this report, we refer to the threshold with the phrase “below \$50 per ton.”

7 By “consumer utility” we mean functionality or usefulness for people, including level of comfort; in this context, holding consumer utility constant would imply, e.g., no change in thermostat settings or appliance use; no downsizing of vehicles, homes, or commercial space; traveling the same mileage annually relative to levels assumed in the government reference case. In a strict economic sense, maintaining constant consumer utility assumes a constant economic surplus for the consumer while delivering against a common benefit. We have not attempted to calculate potential changes in utility that might result from energy price changes associated with pursuing the options outlined in our abatement curve.

proportional to total GHG emissions from the regions, but there are significant variations relative to GDP and population.

Exhibit B

### U.S. MID-RANGE ABATEMENT CURVE – 2030



Source: McKinsey analysis

**Reducing GHG emissions would require capital spending increases and a change in investment patterns relative to the government reference case.** For example, the incremental capital costs associated with capturing the 3.0 gigatons of abatement in our mid-range case would average approximately \$50 billion annually through 2030. Cumulative net new investment through 2030 would be \$1.1 trillion, or roughly 1.5 percent of the \$77 trillion in real investment the U.S. economy is expected to make over this period. This number would be higher if our projected savings from energy efficiency gains do not materialize and/or if the nation chooses to achieve emissions reductions by mandating higher-cost options. These incremental investments would be highly concentrated in the power and transportation sectors; if pursued, they would likely put upward pressure on electricity prices and vehicle costs. Policymakers and legislators would need to weigh these added costs against the energy efficiency savings, opportunities for technological advances, and other societal benefits.

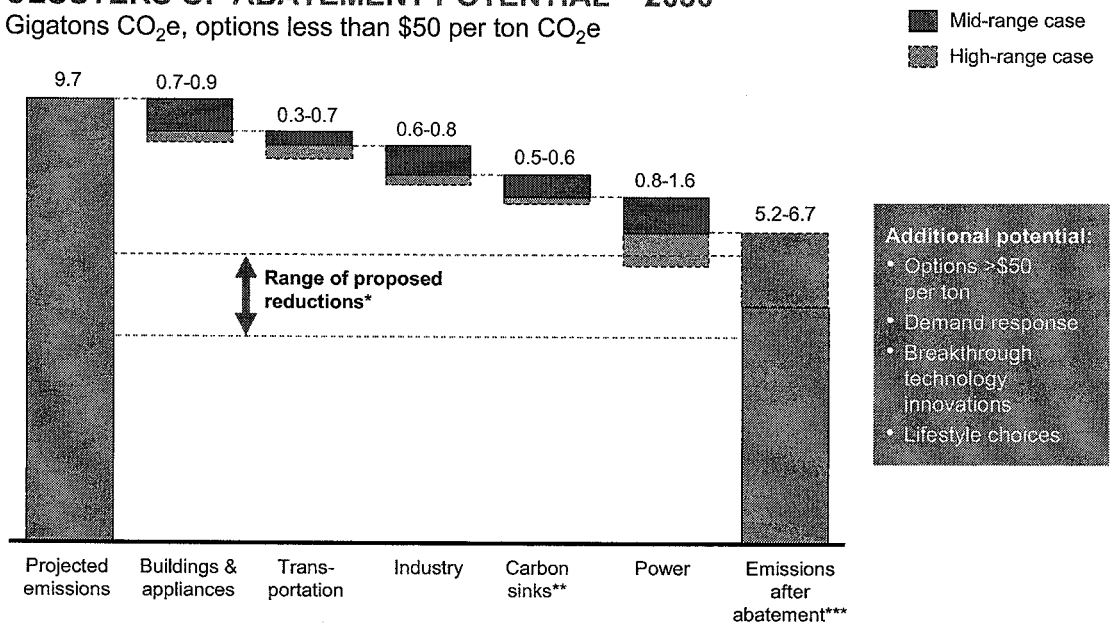
## FIVE SECTORS OFFER CLUSTERS OF ABATEMENT POTENTIAL

Five clusters of initiatives, pursued in unison, could create substantial progress – 3.0 gigatons (mid-range case) to 4.5 gigatons (high-range case) of abatement per year – against proposed GHG-reduction targets for 2030 (Exhibit C). We will discuss these clusters in order, from least to highest average cost.

Exhibit C

### CLUSTERS OF ABATEMENT POTENTIAL – 2030

Gigatons CO<sub>2</sub>e, options less than \$50 per ton CO<sub>2</sub>e



\* Based on bills introduced in Congress that address climate change and/or GHG emissions on an economy-wide basis and have quantifiable targets; targets calculated off the 2030 U.S. GHG emissions of 9.7 gigatons CO<sub>2</sub>e/year (reference case)

\*\* Including abatement in the agriculture sector

\*\*\* Adjusted for cumulative rounding errors

Source: U.S. EIA; EPA; USDA; McKinsey analysis

**1. Improving energy efficiency in buildings and appliances – 710 megatons (mid-range) to 870 megatons (high-range).** This large cluster of negative-cost options includes: lighting retrofits; improved heating, ventilation, air conditioning systems, building envelopes, and building control systems; higher performance for consumer and office electronics and appliances, among other options. While this category of abatement options would cost the least from a societal point of view, persistent barriers to market efficiency will need to be overcome.

**2. Increasing fuel efficiency in vehicles and reducing carbon intensity of transportation fuels – 340 megatons to 660 megatons.** Improved fuel efficiency could provide 240 megatons to 290 megatons of abatement; much of the benefit would come from fuel



economy packages (e.g., lightweighting, aerodynamics, turbocharging, drive-train efficiency, reductions in rolling resistance) and increased use of diesel for light-duty vehicles. Though the savings from fuel efficiency may offset the incremental cost of the abatement option over a vehicle's 12- to 15-year lifecycle, these options require up-front investment by automakers and thus higher vehicle costs for consumers. Lower-carbon fuels, such as cellulosic biofuels, could abate 100 megatons to 370 megatons of emissions, though this potential is highly dependent on innovation rates and near-term commercialization of these technologies. Plug-in hybrid vehicles offer longer-term potential if vehicle cost/performance improves and the nation moves to a lower-carbon electricity supply.

- 3. Pursuing various options across energy-intensive portions of the industrial sector – 620 megatons to 770 megatons.** This potential is in addition to 470 megatons assumed in the government reference case. It involves a multitude of fragmented opportunities within specific industries (e.g., equipment upgrades, process changes) and across the sector (e.g., motor efficiency, combined heat and power applications). Despite offering direct bottom-line benefit, these options must compete for capital and, without clear incentives to control GHG emissions, may not receive funding.
- 4. Expanding and enhancing carbon sinks – 440 megatons to 590 megatons.** Increasing forest stocks and improving soil management practices are relatively low-cost options. Capturing them would require linkages to carbon-offset mechanisms to access needed capital, plus improved monitoring and verification.
- 5. Reducing the carbon intensity of electric power production – 800 megatons to 1,570 megatons.** This potential derives from a shift toward renewable energy sources (primarily wind and solar), additional nuclear capacity, improved efficiency of power plants, and eventual use of carbon capture and storage (CCS) technologies on coal-fired electricity generation. Options in the power sector were among the most capital-intensive ones evaluated. These options also tend to have the longest lead times, given bottlenecks in permitting, materials and equipment manufacturing, and design, engineering, and construction.

**The theme of greater energy productivity pervades these clusters.** Improving energy efficiency in the buildings-and-appliances and industrial sectors, for example, could (assuming substantial barriers can be addressed) offset some 85 percent of the projected incremental demand for electricity in 2030, largely negating the need for the incremental coal-fired power plants assumed in the government reference case. Similarly, improved vehicle efficiency could roughly offset the added mobility-related emissions of a growing population, while providing net economic gains.

## NEED FOR STRONG, ECONOMY-WIDE APPROACHES

The U.S. will need to develop and implement a strong, coordinated program of economy-wide abatement actions in the near future, if it is to achieve emissions reductions proposed (in bills currently before Congress) for 2030 at the lowest cost to the economy.

We believe a comprehensive abatement program for the U.S. should be built on three principal actions:

**1. Stimulate action through a portfolio of strong, coordinated policies to capture GHG reductions efficiently across industry sectors and geographies.** These policies would need to support development of:

- Visible, sustained signals to create greater certainty about the price of carbon and/or required emissions reductions; this will help encourage investment in options with long lead times and/or lifecycles
- A coordinated economy-wide abatement program or set of programs. Because abatement options are highly fragmented and widely distributed across sectors and geographies, any approach that does not simultaneously unleash a full range of abatement options risks missing proposed 2030 reduction targets and/or driving up total cost to the economy
- Exchange mechanisms (e.g., trading schemes, offsets, tax credits) to create fungibility across fragmented markets, create greater market transparency, and drive least-cost solutions
- Verification, monitoring, management, and enforcement systems to ensure sustained abatement impact
- Safeguards against “leakage” and transfer of GHG-emitting activities overseas.

**2. Pursue energy efficiency and negative-cost options quickly.** Many of the most economically attractive abatement options we analyzed are “time perishable”: every year we delay producing energy-efficient commercial buildings, houses, motor vehicles, and so forth, the more negative-cost options we lose. The cost of building energy efficiency into an asset when it is created is typically a fraction of the cost of retrofitting it later, or retiring an asset before its useful life is over. In addition, an aggressive energy efficiency program would reduce demand for fossil fuels and the need for new power plants. These energy efficiency savings are not being captured today, however, suggesting that strong policy support and private sector innovation will be needed to address fundamental market barriers. Policy support might consist of standards, mandates and/or incentives to promote carbon-efficient buildings, appliances, and vehicles. Mechanisms to better align all stakeholders (e.g., end users, manufacturers, utilities, and supporting businesses) should also be considered.

**3. Accelerate development of a low-carbon energy infrastructure.** Transitioning to a lower-carbon economy will require significant changes in the country's energy infrastructure. To accelerate development of a lower-carbon energy infrastructure, the U.S. would need to:

- **Encourage research and development of promising technologies and stimulate deployment.** Of the options we analyzed, some 25 percent (e.g., solar photovoltaics, plug-in hybrid electric vehicles, cellulosic biofuels, CCS) would require additional R&D investment and/or cost compression to achieve the learning rates and scale required to accelerate widespread adoption. This support might include gap-closing financial incentives (e.g., investment tax credits, feed-in tariffs, or direct subsidies) and/or industry or regulatory standards to help achieve scale economies as soon as possible.
- **Streamline approval and permitting procedures.** Many energy infrastructure investments (e.g., nuclear power, transmission lines, and pipelines) have long lead times and can face substantial delays in getting necessary approvals. Permitting and approval delays can substantially increase the risk and cost to investors and, if not specifically addressed, may inhibit pursuit of these capital-intensive abatement options. Some emerging technologies, such as geologic storage of CO<sub>2</sub>, currently have no defined approval and permitting process. Anticipating and addressing potential regulatory hurdles – e.g., siting, liability, and monitoring issues associated with permanently storing large amounts of CO<sub>2</sub> – and developing public and technical review processes to address those issues will be essential to avoid impeding the pursuit of these capital-intensive abatement options.

To address rising GHG emissions comprehensively, the nation would also need to consider abatement options outside the scope of this project. Additional reductions could be achieved by encouraging changes in consumer lifestyles and behaviors (e.g., driving habits, spending decisions) through measures such as price signals or education and awareness campaigns; they could also be achieved by pursuing abatement options with marginal costs greater than \$50 per ton. Finally, we are confident that, in the years ahead, many new ideas and innovations not included in our analysis will emerge. These new technologies, products, processes, and methods could well offer additional abatement potential and lower overall costs.

\* \* \*

This project evaluated the costs and potentials of more than 250 abatement options available in the U.S. We did not examine economy-wide effects associated with abating greenhouse gases, such as shifts in employment, impact on existing or new industries, or changes in the global competitiveness of U.S. businesses. The project did not attempt to assess the benefits to society from reducing global warming. The report also did not attempt to address other societal benefits from abatement efforts, such as improved public health from reducing

atmospheric pollution or improving national energy security. Policymakers would undoubtedly want to weigh these factors – and possibly others – when developing comprehensive approaches for reducing GHG emissions in the U.S.

Creating comprehensive approaches will be challenging: they will need to combine durable policies and a slate of strong near-term actions that mobilize economic sectors and geographies across the U.S. The pursuit of GHG abatement, however, will undoubtedly stimulate new businesses and economic opportunities not covered by our cost-focused analysis.