

# Task Force on Texas' Energy Sector Roadway Needs

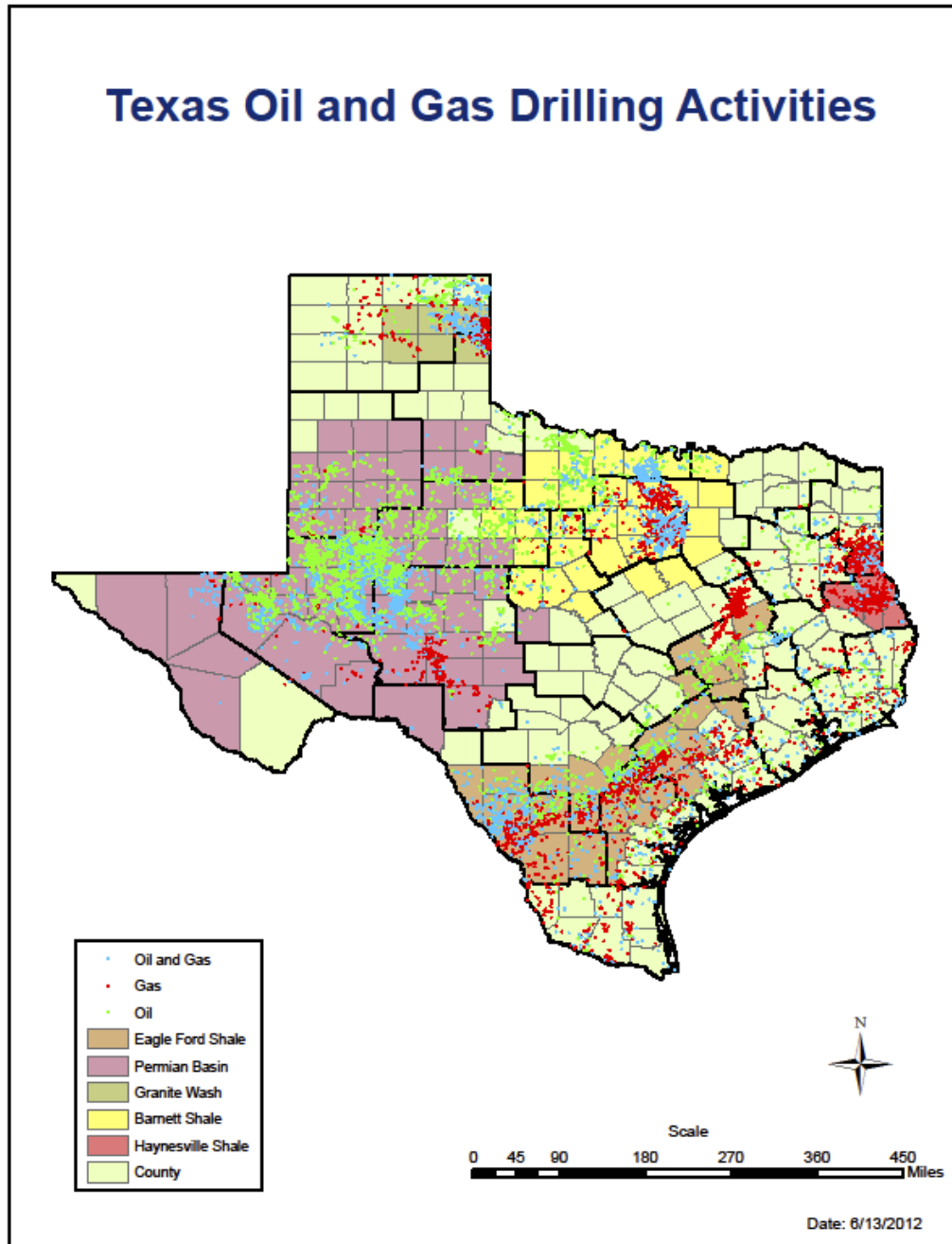
Report to the Texas Transportation Commission

December 13, 2012



## INTRODUCTION

Texas has seen a tremendous increase in the exploration and production of energy resources over the past decade. This increase in energy-related activity has created a very significant positive economic impact for the state. In addition to its positive economic impact, however, the exploration and development of energy resources also significantly affects our transportation infrastructure and challenges the efforts of the Texas Department of Transportation (TxDOT) and local governments to ensure the safety of the traveling public and to protect the taxpayers' investment in our state's highways, roads and bridges.



While Texas' energy resources include oil, natural gas, coal, wind, solar, bio-fuels and nuclear, the production of energy from oil, natural gas and wind has caused the greatest impact on our transportation infrastructure. A great deal of the exploration and production associated with the latter forms of energy occurs in rural areas where most of the roads and bridges were designed for lower volumes of traffic. Production of oil, gas and wind energy, however, requires large numbers of heavy trucks, including many classified as oversize and/or overweight vehicles. Over time, large volumes of heavy truck traffic damage roads and bridges and significantly reduce their service life. The problem is particularly acute on highways, roads and bridges that are not designed or constructed to accommodate heavy loads or oversize vehicles. In addition, the Texas A&M University Transportation Institute (TTI) has concluded that because of impacts on the transportation system, the cost to industry in wear and tear on vehicles and fuel consumption is approximately \$1 billion per year. To investigate and address the impacts of energy exploration and development-related activities on Texas' transportation infrastructure, TxDOT formed the Task Force on Texas' Energy Sector Roadway Needs to spearhead these efforts. Through partnerships with TTI and the University of Texas Center for Transportation Research, TxDOT coordinated several research projects to quantify these impacts.

One research project showed the activities involved and the large number of trucks needed to bring an oil or gas well into production.

**Loaded Trucks per Gas Well**

Activity	Number of Loaded Trucks
Bring well into production	1,184
Maintain production (each year)	Up to 353
Refracturing (every 5 years)	997

The research quantified the cost for rebuilding the infrastructure being consumed by these increased energy-related activities at approximately \$2 billion per year on the state's highway system, and an equivalent amount on local transportation systems such as city streets and county roads. The research also determined that reinforcing or armoring these roadways and bridges in advance of the energy-related traffic increases will create substantial cost savings. The findings of these projects were the basis for TxDOT's request for an additional \$400 million to repair damage on existing roadways and bridges, and \$600 million each year of the upcoming biennium to strengthen and widen roadways and bridges that soon will be impacted.

The Gulf Intracoastal Water Way (GIWW) also has seen an increase in traffic due to the increase in oil and gas production. Monthly volumes of crude oil passing through the Port of Victoria alone will exceed monthly volumes of 1.5 million barrels. Frac sand barges have also increased in volume. At this time the port is receiving 80,000 tons per month with growth expected by next year to exceed 150,000 tons per month. The Victoria County Navigational District has taken out \$18 million in revenue bonds for construction projects to allow the Port of Victoria to handle these demands.

The South Orient Rail Line has also seen an enormous increase in traffic from the oil and gas energy development. In 2012, there was a 400 percent increase in crude oil cars, and from 2006 to 2010, a 234 percent increase in sand car movement. To combat this increase, TxDOT has invested more than \$25 million in the South Orient Rail Line to expand for future energy sector traffic increases.

The Task Force on Texas' Energy Sector Roadway Needs is comprised of representatives from several state agencies, local governments and a variety of energy industry trade associations. In addition to creating partnerships, allowing sister agencies to support the activities of the other agencies involved and sharing information, the task force continues to identify opportunities for innovations to reduce these impacts and to identify potential solutions to common challenges.

The Task Force includes representatives of the following agencies and organizations:

- Texas Department of Transportation
- Texas Department of Public Safety
- Texas Commission on Environmental Quality
- Railroad Commission of Texas
- Texas Department of Motor Vehicles
- Counties
- Cities
- Midland Odessa Transportation Alliance (MOTRAN)
- Texas Oil and Gas Association
- Texas Farm Bureau
- America's Natural Gas Alliance
- Association of Energy Service Companies
- The Wind Coalition
- Texas Independent Producers & Royalty Owners Association
- Texas Motor Transportation Association
- Texas Alliance of Energy Producers
- Texas Competitive Power Advocates (TCPA)
- Texas Pipeline Association

There were originally four subcommittees formed from the Task Force: Innovation/Prevention, Public Awareness, Safety and Funding. Over the course of the year, each subcommittee met numerous times in Austin and through conference calls. The meetings were conducted to establish goals and recommendations and monitor progress. The following is a summary of the accomplishments and recommendations of each subcommittee.

## FINANCE SUBCOMMITTEE REPORT

One of the major challenges in addressing the impact from energy development on roadways is financing for both reactive and proactive maintenance. Large volumes of legally loaded heavy trucks and permitted and un-permitted overweight vehicles damage bridges and reduce pavement life. Pavements are designed to carry the amount of traffic expected to travel that roadway over a specific period of time, usually 20 years, without significant deterioration or damage. Larger than expected volumes of heavy truck traffic consumes the "life" of the pavement in much less time than expected under the original pavement design.

Research and experience has shown that taking proactive approaches to addressing roadway impacts is a much more cost-effective approach to maintaining the infrastructure and reducing overall repair and maintenance costs by approximately 700 percent. Proactive maintenance strategies include reconstructing or resurfacing a road to preserve it before damage occurs. This could be referred to as "armoring" the road to prepare for high-volume, heavy truck traffic. Conversely, a reactive strategy refers to maintaining or repairing the road after damage has occurred. Regardless of the approach, the cost to maintain a safe, efficient transportation system in high development areas across the state is in the hundreds of millions of dollars. For this reason, financing this maintenance and construction is key to addressing energy sector roadway needs.

The Finance Subcommittee's task was to originate, collect and examine new and existing financing methods for use on affected roadways. Please note that the following concepts were put forth by members of the Task Force solely for discussion. Neither the Task Force, TxDOT nor any other state agency is endorsing or recommending any concept listed below.

### *Commercial Driver's License Fee*

- Increase the fee for receiving Commercial Driver Licenses (CDL) in Texas. This would require legislative action.
- Texas has issued 845,543 active CDLs. Each CDL costs \$61 for five years, which generates about \$10.7 million a year.
- Texas issues or renews approximately 170,000 CDLs annually. This means that for every \$6 increase in the CDL fee, \$1 million in revenue is generated.

### *Oversize/Overweight Violations*

- Increase the fines levied on violators of oversize/overweight (OS/OW) permits. This would require legislative action.
- OS/OW violators are currently subject to Class C Misdemeanors with maximum fines of \$500. Tickets written by Texas Department of Public Safety are referred to courts in those counties, which may choose a lesser fine. Repeat violators may be referred to Texas Department of Motor Vehicles (TxDMV) for administrative penalties.
- Increased fines could act as a greater deterrent for OS/OW violators, which would curb the impact made by overweight loads. Additional revenue from increased fines could be shared between the state and the county where the citation is issued.

### *Truck Fee*

- Establish a weight and utilization fee for trucks. The fee would be proportional in that those that weigh the most and travel the system the most would pay the most. This would require legislative action.
- This concept is examined in depth in the Rider 36 OS/OW Permit Fee Study.

### *Severance Tax Bonding*

- Authorize a series of bonds backed by future severance tax revenue. The bond proceeds could be used to upgrade the highway system in affected areas to better handle the volume and weight of truck traffic associated with these activities. This would require legislative action.

### *Severance Tax Dedication*

- Dedicate severance taxes from royalties to their counties of origin. This would increase revenue to county systems, but not the state highway system. This would require legislative action.

### *Dedicated Severance Tax Growth*

- Dedicate any increase in severance taxes after an established date to fund roadway improvements in affected areas. This would require legislative action.
- Since much of the increase in severance tax revenue can be attributed to the growth of energy development, this dedication would allow much of the money to return to the regions in which it originated.

### *Public–Private Partnership*

- With a change in statute, either TxDOT or a county could enter into a public-private partnership to maintain the highway system in an area.
- The private entity would collect user fees from commercial traffic. Fees could vary based on weight and distance travelled on system roads to better align with impacts on the system. Usage could be measured by a number of tools including GPS monitors or electronic tags.

### *County Road Districts*

- Counties currently have the authority to create road districts under Chapter 257 of the Transportation Code. This allows an opportunity for a new property tax to be levied to be used exclusively on roads.
- These districts could exclude current residents from this new tax, only taxing commercial and new residents' properties. Bonds and revenues generated by these districts would not be included in the truth in taxation formulas.

### *Tire Tax*

- Authorize the creation of an excise tax on oversized tires, similar to the existing federal tax. This would require legislative action.
- This would have the effect of raising revenue from those that may have a disproportionate impact on the system given their larger loads.

### TRIZ/TIF

- Local governments could consider establishing a Tax Increment Reinvestment Zone (TIRZ) to implement Tax Increment Financing (TIF). This could allow a local government to dedicate or bond off the increase in severance taxes collected after a TIRZ is established.
- With this method, an increase in tax revenue from development would be directed to infrastructure in the area collected. This would increase revenue to county systems, but not the state highway system.

### County Mineral Rights

- Supersede an outstanding Attorney General opinion which held that counties have no mineral rights in land owned by counties or TxDOT. This would require legislative action.
- Currently, the General Land Office receives royalty payments for oil and gas extracted from under county right of way. If a change is made, these proceeds could be directed to counties or TxDOT, which could apply the funds to transportation.

## PUBLIC AWARENESS AND SAFETY SUBCOMMITTEES REPORT

One of the most significant issues presented to and discussed by the Task Force on Texas' Energy Sector Roadway Needs was the matter of roadway safety in areas impacted by increased energy exploration and production. The Public Awareness and Safety Subcommittees began as separate entities; however, after their initial meetings, the two groups determined their initiatives were similar and decided to merge their work efforts.

### Public Awareness Subcommittee

The Public Awareness Subcommittee was comprised of representatives from state agencies, the oil, gas and wind industries, the Farm Bureau and local governments. As part of the effort to improve safety and increase public awareness and involvement, the Task Force hosted open houses across the state to inform local officials and community residents about safety initiatives and other measures to maintain and preserve transportation infrastructure. The open houses were held in conjunction with Task Force meetings in Cleburne, Midland, Laredo and Amarillo. State agencies that actively participated in these efforts included TxDOT, Railroad Commission of Texas, TxDMV, Texas Commission on Environmental Quality and TxDPS.

Also, as part of the public outreach, an interactive website was developed at [www.roadsoftexasenergy.com](http://www.roadsoftexasenergy.com). The website features information regarding the Task Force and its work, along with research on the impact of increased energy exploration and production on the state's infrastructure. The website also features links to social media for public use.

The Public Awareness Subcommittee in its discussions regarding the need to increase driver safety awareness, both with the public and industry, reviewed existing public awareness campaigns designed to address driver safety. The subcommittee determined it would be beneficial to embark on the development of a campaign tailored to the promotion of driver safety in areas with increased energy production and exploration.



### **Safety Subcommittee**

The Safety Subcommittee began its efforts by working with TxDOT and TxDPS staff to obtain and review vital traffic and crash data from the affected areas across the state. The data showed that nearly half of all the fatal (K), incapacitating (A) and non-incapacitating (B) crashes (KAB crashes) occurring in these regions involve a single vehicle. More of them occur during the 5:00 p.m. hour than any other time of the day, more than 60 percent of the drivers are male and nearly two-thirds occur on the state highway system. The number one cited contributing factor in these crashes is "Failure to Control Speed," followed closely by "Driver Inattention." Finally, less than 10 percent of KAB crashes involved a commercial motor vehicle.

Based on the traffic and crash data obtained, the Safety Subcommittee determined, just as the Public Awareness Subcommittee, that it would be beneficial to develop a public awareness campaign tailored toward safety in the areas impacted by increased energy industry traffic.

### **Public Awareness Campaign**

TxDOT, with the guidance of the Public Awareness and Safety subcommittees, contracted with Sherry Matthews Advocacy Marketing to develop a "safe driving" campaign. The goal of the campaign is to raise public awareness about the importance of driving safely in the areas affected by increased oil and gas exploration.

The campaign will use media, public relations and grassroots marketing efforts to deliver key safety messages to local residents and industry workers in target areas. The campaign will begin with counties in the Eagle Ford Shale and Permian Basin areas which have been shown by traffic and crash data to be at higher risk for unsafe driving and accidents. Following introduction in the target areas, the campaign will expand to other key areas throughout the state.

TxDOT and the subcommittees anticipate launching the campaign in January and continuing it throughout 2013.

## **INNOVATION/PREVENTION SUBCOMMITTEE REPORT**

The Innovation/Prevention Subcommittee was tasked with identifying any innovations that would prevent or reduce impacts to the transportation infrastructure and the energy industry. The participants included representatives from several state agencies, energy industry professionals and local government officials.

### ***Identify current and future energy sector activities:***

- The Task Force has developed contacts with local industry professionals. These contacts will be used as resources to gain knowledge of any developing energy activities
- A relationship with the Railroad Commission has been developed. Through this relationship, the Task Force is receiving data on new well permits, production data, etc. This data will show any expanding activities which will allow us to plan for the increased impacts to the highway system, rail system, ports and the GIWW.



***Develop statewide driveway standard:***

- The subcommittee helped to develop a statewide driveway standard to address the commercial driveways associated with these activities. This standard is needed to prevent safety issues occurring at these locations. The standard details help to prevent the tracking of mud on roadways and ensures the driveways are constructed wide enough to allow trucks to enter the roadway safely.

***Provide temporary commercial vehicle inspection stations:***

- The subcommittee coordinated with TxDPS to research the minimum design standards for a commercial vehicle inspection station.
- It was also recommended for designers to incorporate in their processes the construction of these temporary inspection stations on roadway projects underway in these areas.

***Encourage the use of temporary water lines:***

- The use of the temporary water lines in state right of way would reduce the volume of trucks on the roadway. There is a standard lease agreement being developed with an associated fee for securing an agreement. This would encourage the use of this alternative to trucking water.

***Evacuation of Energy Sector Areas during emergencies:***

- Coordination with TxDOT emergency management coordinators in the Eagle Ford Shale areas of the state is encouraged and underway to ensure the safe and efficient evacuation of the all traffic from these energy sector areas. This coordination also includes any energy industry personnel in these areas.

**CONCLUSION**

The hard work and cooperation of the various agencies and industries participating on the Task Force on Texas' Energy Sector Roadway Needs has shown to be a success. Through the efforts of the Task Force, new funding alternatives have been explored, new relationships between industry and government have been formed, a new public awareness campaign is being developed and new safety initiatives have been established. With the continued participation and support of the task force members, the state's transportation system will continue to be safe and efficient both within and out of energy sector areas.

