



# Welcome to Texas!



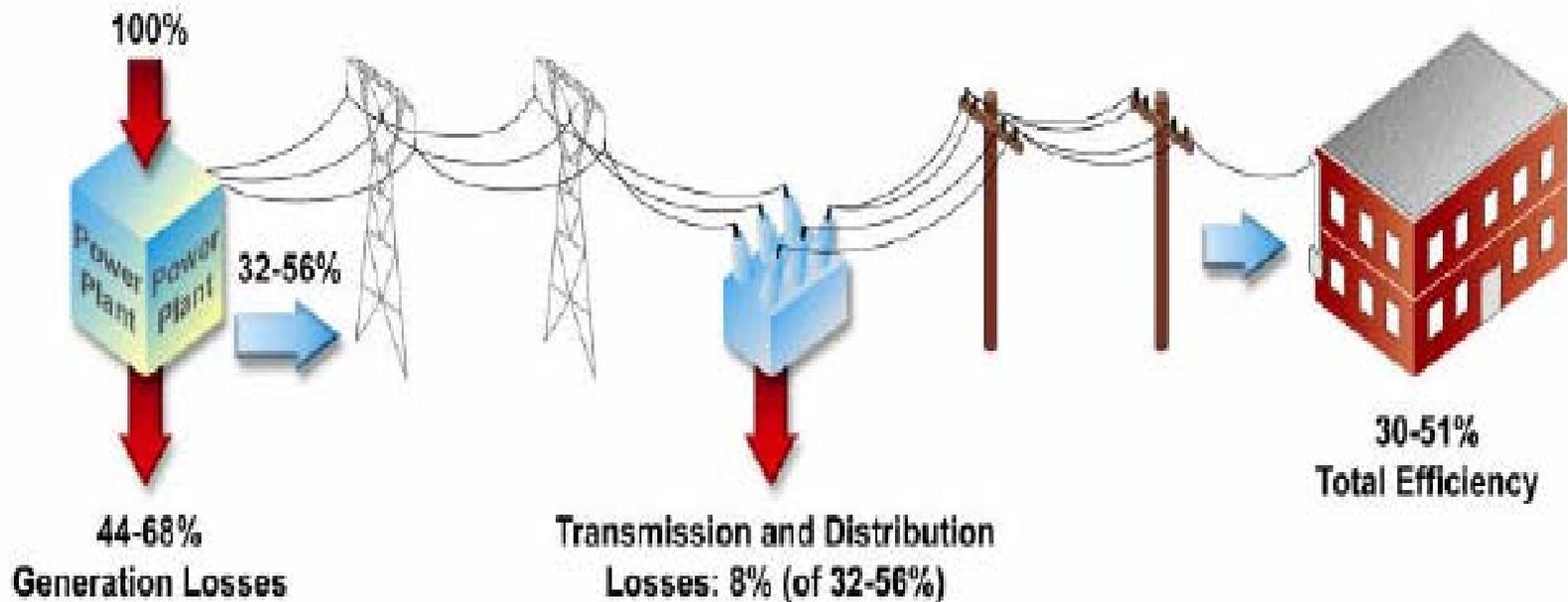
# The Texas Energy Picture

- ❖ Oil & Gas production peaked in 1972
- ❖ Texas became a net energy importer in 1993
- ❖ 5th largest energy user in the world
- ❖ Texas accounts for 12% of U.S. energy consumption – why?
  - ❖ 60% of US petrochemical production
  - ❖ 25% of US refining capacity
  - ❖ 19 million vehicles
  - ❖ 22 million population

# Electricity Production

- ❖ Annual growth in electrical use averaged +2.5% over last 10 years
- ❖ 350K GWh annually
- ❖ 70K MW peak demand (August)
- ❖ Electric generating fuel
  - ❖ Natural gas 44%
  - ❖ Coal 40%
  - ❖ Nuclear 14%
  - ❖ Renewable 2%

# How Electric Consumption Impacts Emissions (3-1 Rule)



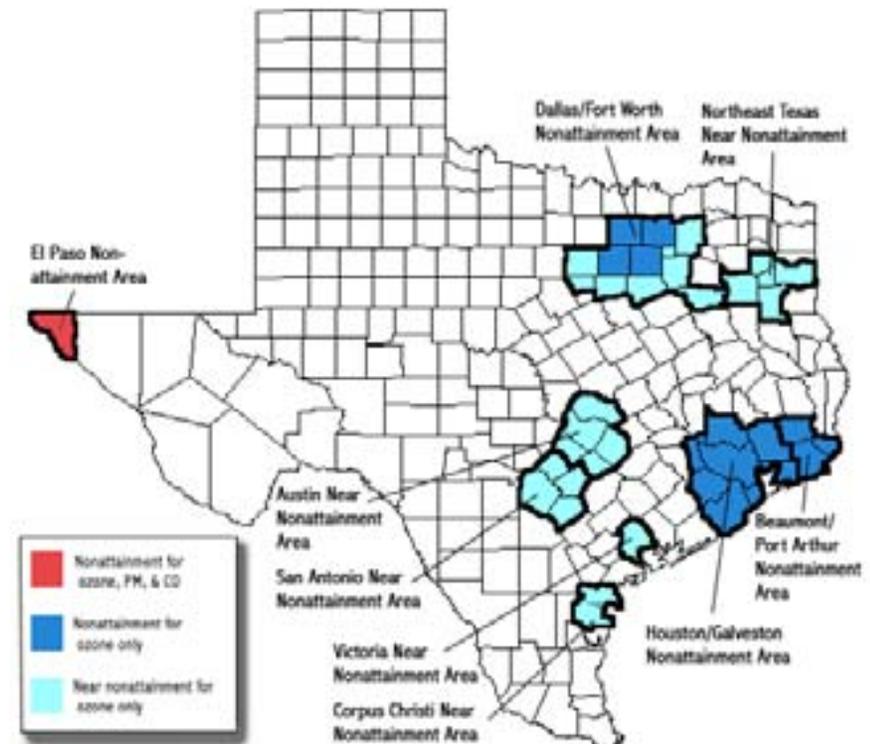
# Texas Ozone Non-Attainment and Near Non-Attainment Counties

## Non-Attainment

- ❖ Dallas/Fort Worth
- ❖ Houston/Galveston
- ❖ Beaumont/Port Arthur
- ❖ El Paso

## Near Non-Attainment

- ❖ Austin/San Antonio
- ❖ Corpus Christi/Victoria
- ❖ Tyler/Longview/Marshall



# Texas Emissions Reduction Plan

SB 5, 77<sup>th</sup> Texas Legislature(2001)

## Mobile

- ❖ Emissions Reduction Incentive Grants
- ❖ New Technology Research and Development

## Building Energy Efficiency

- ❖ **Building Energy Performance Standards**
- ❖ Local Government Energy Efficiency

# SIP-Creditable EE/RE



- ❖ **Building energy codes**
- ❖ Local solar photo-voltaic (PV) installations
- ❖ Local solar thermal installations
- ❖ Zero emission distributed generation (Fuel cells)
- ❖ Wind power purchases
- ❖ Water/wastewater energy-related improvements
- ❖ Street lighting and traffic signal lighting improvements
- ❖ Energy conservation building retrofits
- ❖ Appliance upgrades and cool roofs
- ❖ **LEED-certified or comparable new buildings**
- ❖ Building commissioning projects

# Code Training and Support

- ❖ DOE
- ❖ EPA
- ❖ Texas A&M, ESL
- ❖ Texas State Energy Conservation Office
- ❖ Texas Commission on Environmental Quality
- ❖ North Central Texas Council of Governments
- ❖ Texas Association of Builders
- ❖ Greater Houston Builders Association
- ❖ Greater Dallas Home Builders Association
- ❖ BCAP
- ❖ Alliance to Save Energy



HOME

ABOUT SECO

RESOURCES

CONTACT US

TECHNICAL SUPPORT

ACKNOWLEDGEMENTS

# STATE ENERGY CONSERVATION OFFICE

## VIDEO TRAINING SERIES

### WELCOME

Homebuilders and Building Professionals face a tremendously changing environment today. You are faced with the constant need to update your knowledge of that environment in the light of changing materials, building codes, liability and customer expectations.

This video, sponsored by the Texas State Energy Conservation Office (SECO) of the Comptroller of Public Accounts and funded by the U.S. Department of Energy, will provide you with a wealth of information on two of the most pressing issues for homebuilders today; the new TX Residential Energy Code and mold and water intrusion issues.

Part 1 of the Video will introduce you to the Texas Energy Code, its requirements, and show you how to easily comply with those requirements. In Part 2, you will learn the latest Applied Building Science behind building with the "systems approach" to residential construction for

#### SELECT FROM THE MENU

##### ▲ TEXAS RESIDENTIAL ENERGY CODE:

INTRODUCTION AND BACKGROUND

COMPLIANCE METHODS

OVERVIEW AND SCOPE

BASIC REQUIREMENTS: AIR LEAKAGE

BASIC REQUIREMENTS: VAPOR RETARDERS

BASIC REQUIREMENTS: INSULATION/WALLS

BASIC REQUIREMENTS: WINDOWS

BASIC REQUIREMENTS:

HVAC/DUCT/ELECTRICAL/HOT WATER

RESCHECK PRESCRIPTIVE COMPLIANCE

RESCHECK SOFTWARE

##### APPLIED BUILDING SCIENCE:

INTRODUCTION

FOUNDATIONS

FRAMING/ROOF

MECHANICALS

INSULATION/DRYWALL/PLUMBING/ELECTRICAL

ADDITIONAL TIPS

WHAT TO DO IF YOU HAVE MOLD

▼ CONCLUSION



SALIR

INICIO

ACERCA DE SECO

RECURSOS

CONTÁCTENOS

SOPORTE TÉCNICO

AGRADECIMIENTOS

# OFICINA DE CONSERVACIÓN DE ENERGÍA

## SERIE DE ENTRENAMIENTO DE VÍDEO

### BIENVENIDOS

Los constructores de viviendas y los profesionales de la construcción hacen frente hoy en día a un ambiente con grandes cambios. Ustedes tienen la necesidad constante de poner al día su conocimiento de ese ambiente respecto a cambios en materiales, en los códigos de construcción, en la responsabilidad y en las expectativas de los clientes.

Este video, patrocinado por la Oficina de Conservación de Energía del Estado de Texas (SECO), localizada en la Oficina del Contralor (Interventor) de Cuentas Públicas, y financiado por el Departamento de Energía de los Estados Unidos, le proporcionará una abundante información sobre dos de los temas más importantes para los constructores de viviendas de hoy: El cumplimiento con el nuevo Código de Conservación de Energía de Texas, y el control de la penetración de agua y humedad, así como el control del desarrollo del moho.

#### SELECCION DEL MENU

##### ▲ CODIGO RESIDENCIAL DE ENERGÍA DEL ESTADO DE TEXAS:

INTRODUCCIÓN Y ANTECEDENTES

MÉTODOS DE CUMPLIMIENTO

GENERALIDADES Y ALCANCE

REQUISITOS BÁSICOS: FUGAS DE AIRE

REQUISITOS BÁSICOS: BARRERAS DE VAPOR

REQUISITOS BÁSICOS: AISLAMIENTO

REQUISITOS BÁSICOS: VENTANAS

REQUISITOS BÁSICOS: DUCTOS Y ELECTRICIDAD

CUMPLIMIENTO PRESCRIPTIVO MEDIANTE RESCHECK

##### CIENCIA APLICADA DE LA CONSTRUCCIÓN:

MENOS PROBLEMAS, MEJORES VIVIENDAS, MAYORES GANANCIAS ▼

# How are we doing?

Things are looking down...

- ❖ Emissions ↓

- ❖ 824 annual NOx tons by 2007

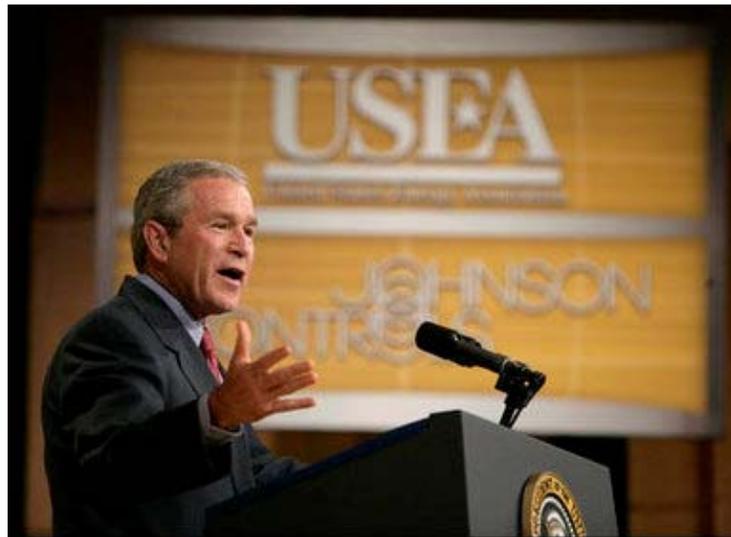
- ❖ Building/material costs ↓

- ❖ Low-E windows 1/3 cost of pre-code

- ❖ Consumer energy bills ↓

- ❖ \$1 billion by 2008

"You see, increasing energy efficiency will help consumers save money. Increasing energy efficiency will leave American businesses with more capital, will make American businesses more competitive. Increasing energy efficiency will help reduce our energy consumption, and to help us achieve a vital national goal, and that is making America less dependent on foreign sources of energy."



President George W. Bush - June 15, 2005