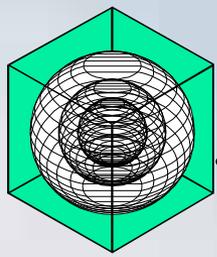


Texas Emissions Reduction Plan (TERP) **(Senate Bill 5)**

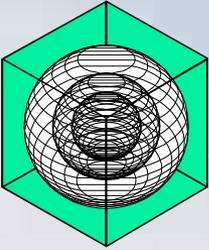
Texas Building Energy Performance Standards
for the
2003 DOE National Workshop on State Building Energy Codes
Atlanta, GA
June 23-26, 2003

Bahman Yazdani P.E., Tom Fitzpatrick,
Energy Systems Laboratory
Texas A&M University System



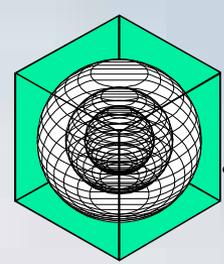
Introduction

- What is TERP?
- Who's involved?
- What are its building energy provisions?
- Some definitions



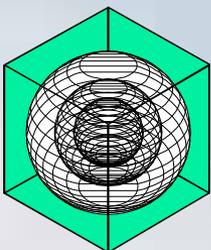
What is TERP?

- TERP (Senate Bill 5) is an innovative and comprehensive piece of legislation that
 - eliminates some provisions of the SIP that were perceived to be onerous
 - replaces these with incentive programs and policy initiatives intended get the same or better results through influencing market choices
 - outlines a cooperative framework for a common ground of science-based evaluation for market based actions and market transforming initiatives
 - relies on broad participation.



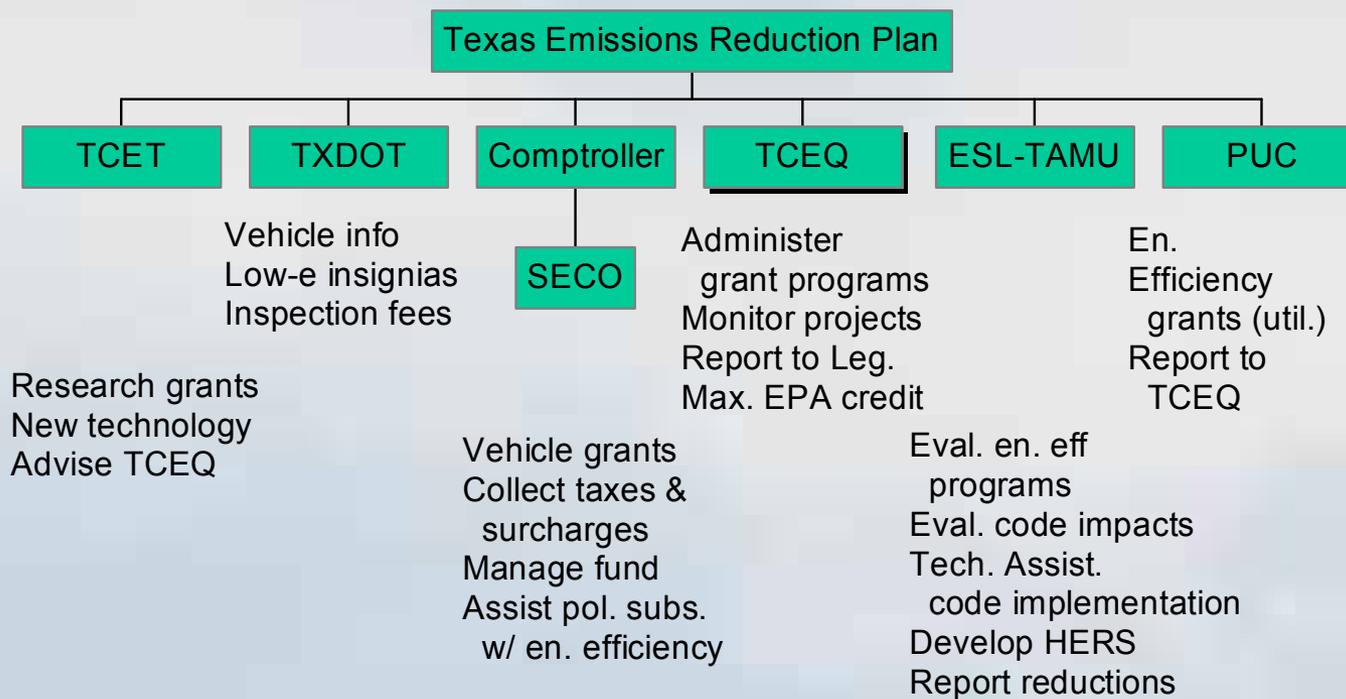
Texas Emissions Reduction Plan

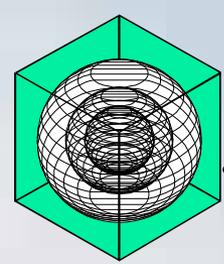
- a diesel emissions reduction incentive program;
- a motor vehicle purchase or lease incentive program;
- a new technology research and development program;
- an energy efficiency grant program; and
- building energy performance standards.



Overview of TERP Agencies

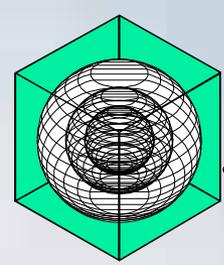
SB 5 Agencies





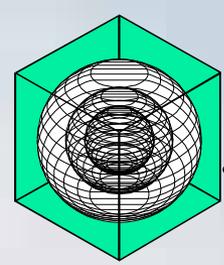
Overview of TERP – ESL Tasks

- Sec. 386.205. Evaluation Of State Energy Efficiency Programs.
- Sec. 388.003. Adoption Of Building Energy Efficiency Performance Standards. (Review)
- Sec. 388.004. Enforcement Of Energy Standards Outside Of Municipality. (Form)
- Sec. 388.007. Distribution Of Information And Technical Assistance.
- Sec. 388.008. Development Of Home Energy Ratings.



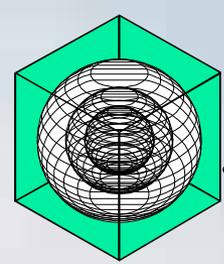
Important Dates

- Effective date of SB 5 is 9-1-01.
- The referenced edition of codes is the edition at 5-1-01 (2000 w/ 2001 Supplement)
- Requires local administration and enforcement procedures in place by 9-1-02
- Requires biennial reports to Legislature by 12-1-02 and following.



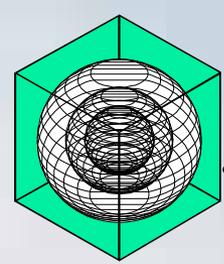
Important Provisions

- Adopts state-wide codes for building energy performance.
- Provides for application statewide, including outside municipal jurisdictions.
- Requires energy efficiency programs for existing facilities of local government in certain areas.



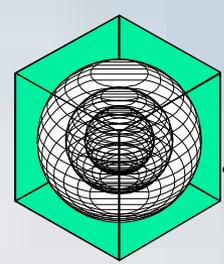
Building Energy Performance Standards Adopted

- energy efficiency chapter of the International Residential Code, as appropriate, for single family residential construction, and
- International Energy Conservation Code 2000 with 2001 supplement for all other residential, commercial and industrial construction in the state.
- Requires that municipalities establish procedures
 - administration and enforcement
 - ensure that code-certified inspectors perform inspections.



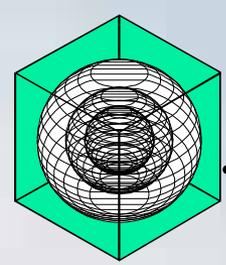
Energy Efficiency in Public Facilities

- in a non-attainment area or an affected county, each political subdivision, except a school district, is to implement energy conservation measures to reduce electric consumption in its facilities
 - by a goal of 5 percent per year for 5 years.
 - must report annually to the State Energy Conservation Office (SECO) on its progress.
- SECO is required to report annually to TNRCC an evaluation of effectiveness



Non-Attainment or Affected Counties

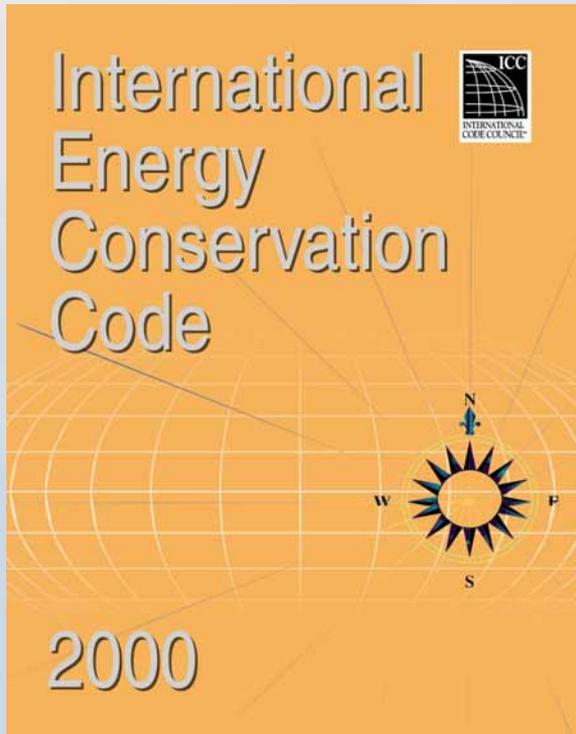
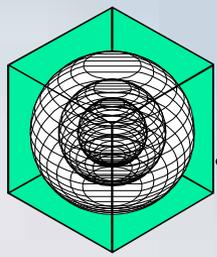
Bastrop, Bexar, Brazoria, Caldwell,
Chambers, Collin, Comal, Dallas, Denton,
Ellis, El Paso, Fort Bend, Galveston, Gregg,
Guadalupe, Hardin, Harris, Harrison, Hays,
Jefferson, Johnson, Kaufman, Liberty,
Montgomery, Nueces, Orange, Parker,
Rockwall, Rusk, San Patricio, Smith, Tarrant,
Travis, Upshur, Victoria, Waller, Williamson,
Wilson



International Energy Conservation Code

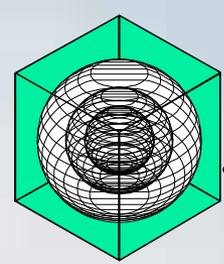


What is the IECC?



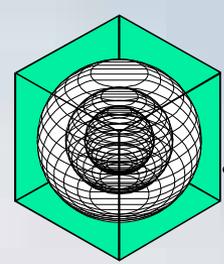
A REQUIRED MINIMUM LEVEL OF ENERGY EFFICIENCY IN NEW CONSTRUCTION

- Enables effective use of energy in new building construction
- Regulates the design and selection of the
 - building envelope
 - mechanical systems
 - electrical systems
 - service water heating systems



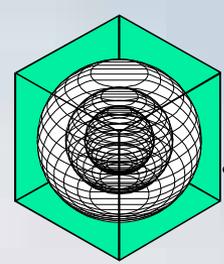
Local Amendments

- Local amendments allowed.
- In non-attainment areas and affected counties, may not result in less stringent energy efficiency requirements.
 - Texas A&M Energy Systems Laboratory (ESL) to review local amendments and submit annual report of savings impacts to TNRCC.



Outside of Municipal Jurisdictions

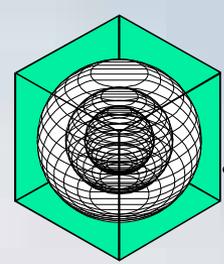
- A building certified through an energy efficiency (above-code) program is considered in compliance;
- A building inspected by a code-certified inspector (warranty inspection) is considered in compliance; otherwise,
- A builder may self-certify a building with a form to be provided by ESL.



Credit Where Credit is Due

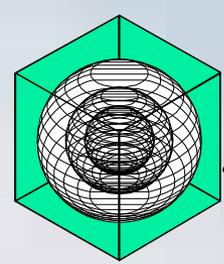
- Texas Natural Resources Conservation Commission

"...shall take all appropriate and necessary actions so that emissions reductions achieved by means of activities under chapters 386 and 388 are credited by the United States Environmental Protection Agency to the appropriate emission reduction objectives in the state implementation plan."



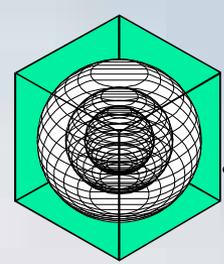
Words to Live By

- **Ozone season** – the portion of the year when ozone monitoring is federally required to occur in a specific geographic area.
- **Protocol** – a replicable and workable method of estimating emission rates or activity levels used to calculate the amount of emission reduction generated or credits required for stationary or mobile sources.



Words to Live By

- **Emission reduction** – an actual reduction of emissions from a stationary or mobile source.
- **Emission reduction credit (ERC)** – a certified emission reduction that is created by eliminating future emissions, quantified during or before the period in which emission reductions are made ,and expressed in tons per year.



Words to Live By

- **Permanent** – an emission reduction that is long-lasting and unchanging for the remaining life of the source. Such a time period must be enforceable.
- **Quantifiable** – an emission reduction that can be measured or estimated with confidence using replicable methodology.
- **Surplus** – an emission reduction that is not otherwise required of a source by any local, state or federal law, regulation, or agreed order.

NAAQS

Pollutant	Averaging Period	Standard	Primary NAAQS	Secondary NAAQS
Ozone	1-hr	Not at or above this level on more than 3 days over 3 years	125 ppb	125 ppb
	8-hr	Ave. of the annual 4 th highest daily 8 hour max over 3 year period not at or above	85 ppb	85 ppb
Nitrogen Dioxide	Annual	Not at or above	54 ppb	54 ppb

Source: TNRCC, Air Pollution Concentrations Required to Exceed the NAAQS