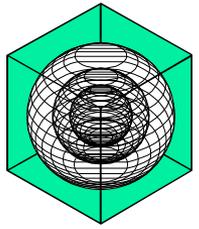


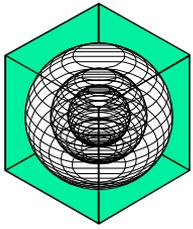
# When Were You First Aware of Non-Attainment?

- 1983-moved from Houston to Austin for smaller, cleaner city
- 1990-Houston classified “severe” non-attainment
- 1994-Texas cancelled Inspection & Maintenance contract; reduces enforcement
- 1996-DFW reclassified “serious” non-attainment; demonstration of attainment due by 1999
- 1997-Texas settles I&M contract cancellation suit for \$140 million
- 1998-as new Executive Director of TBEI, I inherited a Special Project for promoting the MEC



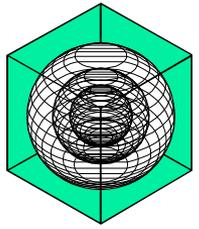
# Whose Idea Was It To Include Energy Code As A Solution?

- The opportunity grew out of a history of individual commitments
- Special thanks to:
  - Dr. Jerry Matthews, former director of TBEI and TECC; currently Executive Director of Texas Council on Environmental Technology
  - Walt Patterson, retired MEC advocate, UT Arlington
  - Jim Sargent, Waxahachie builder
  - Tom “Smitty” Smith, Director of Texas Office of Public Citizen
  - Political leadership: Sen. Buster Brown, Reps. Steve Wolens and Warren Chisum. Judge Ron Harris



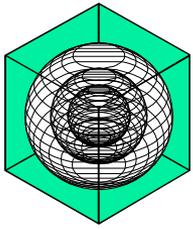
# How Did You Start?

- '98- inherited MEC promotion; discussed 98 IECC w/ Smitty and EDF – SHGC
- '99- SB 7- elec. dereg. (energy efficiency, renewables, removal of grandfathering)
- '99- SIP development –DFW and Houston; public participation (Blue Skies); HBA
- '99- SP brochure for community leaders
- '00-NCTCOG code review process
- '01- SB 5 negotiation process



# SB 5, 77<sup>th</sup> Texas Legislature

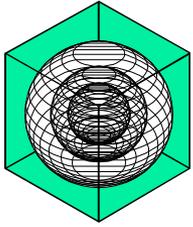
- Amends Subtitle C, Title 5, Health & Safety Code, recognizing clean air as a critical issue for health of all Texans
- Depends upon a broad base of participation in addressing air quality issues
- Provides policy initiatives to encourage market transformations and technology development
- Modified the State Implementation Plan



# Overview of SB 5

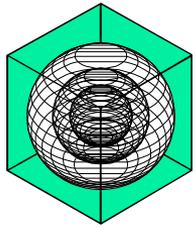
- Establishes **Texas Emissions Reduction Plan**, including
  - a diesel emissions reduction incentive program,
  - a motor vehicle purchase or lease incentive program,
  - a new technology research and development program,
  - an energy efficiency grant program, and
  - building energy performance standards.

*Footnote: funding woes*



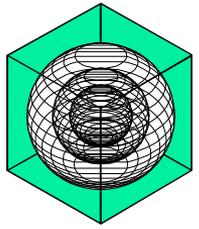
# Local Amendments

- 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.



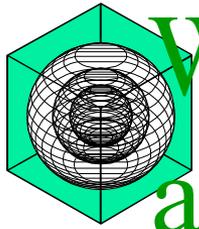
# Outside of Municipal Jurisdictions

- 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.



# Energy Systems Laboratory of Texas A&M System

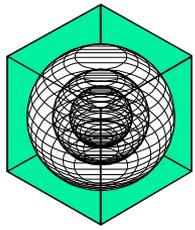
- is responsible for evaluating the energy savings impacts and related emission reductions of building energy efficiency provisions;
- is responsible for making code implementation materials available to building community;
- provides training and technical assistance.



# What Is Role of Non-Attainment and Affected Counties in Texas?

- 70% of state's population
- 76.4% of aggregate employment
- 83.4% of personal income
- 83% of Gross State Product
- 85% of Texas manufacturing activity

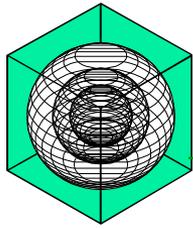
Data Source: The Perryman Group. *The Importance of Maintaining A Proper State Implementation Plan (SIP) to Address Air Quality Issues in Texas: An Economic and Fiscal Impact Assessment*. November 2002.



# What's the Cost of Failure? Health Effects (on Business)

- “Low” Scenario
  - \$6.3 billion in Total Expenditures
  - \$3.2 billion in Gross Product
  - \$2.2 billion in Personal Income
  - 56,356 Permanent Jobs
  - \$157.4 million in State Revenue
- “High” Scenario
  - \$13.7 billion in Total Expenditures
  - \$7.0 billion in Gross Product
  - \$4.8 billion in Personal Income
  - 123,763 permanent Jobs
  - \$345 million in State Revenue

Data Source: The Perryman Group. *The Importance of Maintaining A Proper State Implementation Plan (SIP) to Address Air Quality Issues in Texas: An Economic and Fiscal Impact Assessment*. November 2002.

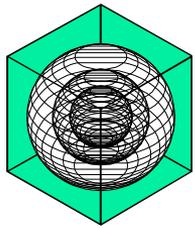


# What's the Cost of Failure?

## Expansion Restrictions (10 yr.)

- Direct only
  - \$438.4 billion in Total Expenditures
  - \$150.2 billion in Gross Product
  - \$84.2 billion in Personal Income
  - 1,758,847 Permanent Jobs
  - \$7.2 billion in State Revenue
- Including other sectors
  - \$586.6 billion in Total Expenditures
  - \$219 billion in Gross Product
  - \$126.8 billion in Personal Income
  - 2,7514,02 Permanent Jobs
  - \$10.6 billion in State Revenue

Data Source: The Perryman Group. *The Importance of Maintaining A Proper State Implementation Plan (SIP) to Address Air Quality Issues in Texas: An Economic and Fiscal Impact Assessment.* November 2002.

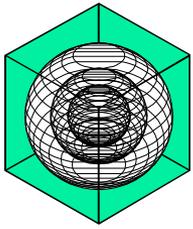


# What's the Cost of Failure?

## Lost Highway funds (1 yr.)

- During Construction
  - \$3.6 billion in Total Expenditures
  - \$1.7 billion in Gross Product
  - \$1.1 billion in Personal Income
  - 27,122 Person-years of Employment
  - \$88.6 million in State Revenue
- After Construction
  - \$464.3 million in Total Expenditures
  - \$238.3 million in Gross Product
  - \$145 million in Personal Income
  - 4,830 Permanent Jobs
  - \$13.1 million in State Revenue

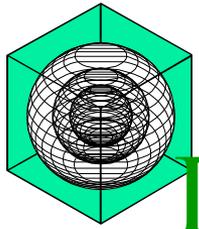
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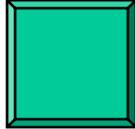
# Costs: 10 Year Simulation

- “Low” Scenario
  - NPV of State Revenues \$23.993 billion
  - Benefit /Cost ratio: 63.8 to 1
- “High” Scenario
  - NPV of State Revenues \$35.667 billion
  - Benefit /Cost ratio: 94.9 to 1

Data Source: The Perryman Group. *The Importance of Maintaining A Proper State Implementation Plan (SIP) to Address Air Quality Issues in Texas: An Economic and Fiscal Impact Assessment*. November 2002.



# Once Adopted, What Did You Do To Implement and Enforce?

- The role of the Energy Systems Laboratory is to help people be successful in saving energy – and then measure results
- Failure of funding required focus on a few basic areas initially:
  - Answer the phone (and email) 
  - Compliance training for builders and designers (Spec. Project)
  - Enforcement training for code officials
- Next: data collection, continuous training, continuous improvement