


Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reduction Plan (TERP)

September 2001 – December 2007

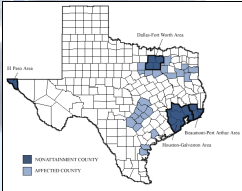
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Texas Engineering Experiment Station
Texas A&M University System



Legislative Response

41 Counties in Texas designated non-attainment or affected.


Senate Bill 5 (77th Legislature, 2001)
CA 386, Texas Emissions Reduction Plan
Sec. 386.205, Evaluation Of State Energy Efficiency Programs (with PUC)
CA 388, Texas Building Energy Performance Standards
Sec. 388.003, Adoption Of Building Energy Efficiency Performance Standards
Sec. 388.004, Enforcement Of Energy Standards Outside Of Municipality
Sec. 388.007, Distribution Of Information And Technical Assistance
Sec. 388.106, Development Of Home Energy Ratings.
TERP Amended (78th Legislature, 2003)
CA 388, Texas Building Energy Performance Standards
(HB 1395) Sec. 388.004, Enforcement Of Energy Standards Outside Of Municipality.
(HB 1395) Sec. 388.009, Energy Efficient Building Program.
CA 388, Texas Building Energy Performance Standards
(HB 3223) Sec. 388.004, Certification of Municipal Inspectors.
TERP Amended (79th Legislature, 2005)
CA 382, Health and Safety Code
(HB 2129) Sec. 386.056 Development of Creditable Statewide emissions from wind and other renewables.
(HB 2653) Sec. 386.075 Commission Action Relating to Water Heaters
TERP Amended (80th Legislature, 2007)
CA 382, Health and Safety Code
(HB 3632) Sec. 388.003 added subsection (b-1), (b-2), (b-3) that allow SECO to adopt new editions of the IECC based on written recommendations from the Laboratory.
(HB 3632) Sec. 388.009 Development of standardized report formats for newly constructed residences.
CA 386.252 Health and Safety Code
(SB 12) Section 386.03 added subsection (b-1), (b-2) allow SECO to adopt new editions of the IECC based on written recommendations from the Laboratory.



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INTEGRATED NOx SAVINGS

IN 2005 TCEQ INITIATED A PROGRAM TO DETERMINE INTEGRATED EMISSIONS SAVINGS (2009 & BEYOND) TO REPORT SAVINGS TO EPA

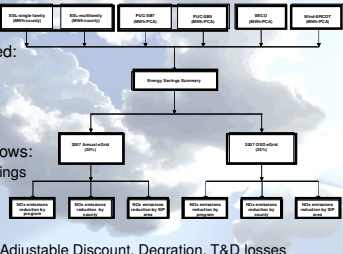


State Agencies included:

- TEES/ESL,
- PUC,
- SECO,
- ERCOT/Wind

Savings Integration allows:

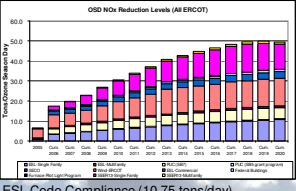
- Annual, OSD savings
- By County
- By SIP
- By Program
- Integration tool = Adjustable Discount, Degradation, T&D losses



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INTEGRATED NOx SAVINGS

CUMULATIVE NOx EMISSIONS SAVINGS (2013)



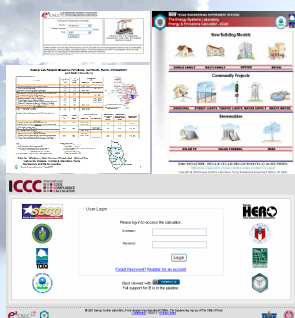
- ESL Code Compliance (10.75 tons/day)
- Federal Buildings (0.81 tons/day)
- Furnace Pilot Lights (0.32 tons/day)
- PUCs SB7, SB5 programs (4.78 tons/day)
- SECO Political Sub. (0.84 tons/day)
- Green Power (Wind) (12.32 tons/day)
- SEER 13 Retrofits (11.03 tons/day)
- Total (40.86 tons/day)

Annual Reporting to the TCEQ, papers, etc.

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NEW TOOLS TO HELP REDUCE ENERGY AND NOx EMISSIONS

- eCalc Energy & Emissions Calculator
 - Residential, Commercial
 - Municipal buildings, traffic lights, street lights, water
 - Solar thermal, PV, wind
- Synchronous NOx Emissions Calculator
 - Quick results for MWh savings in any county
- International Code Compliance Calculator (ICCC)
 - Calculates code compliance for 2001 IECC + SEER 13
 - Allows for 15% above code compliance calculations
- 15% above-code measures (41 Cos.)
 - Residential - 11 measures
 - Commercial - 10 measures



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