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GETTING PROPER CREDIT IN TEXAS FOR OUR EFFORTS TO IMPROVE AIR QUALITY & REBUILDING SMART & RESILIENT IN TEXAS

Under Chapter 386 of the Health and Safety Code, the Energy Systems Laboratory, a unit of the Texas A & M Engineering Experiment Station, is charged with being the state’s analyst for most of our utility, state and local government energy efficiency programs, as well as the analyst of the positive impacts of new energy codes for construction. Thus, ESL measures both the energy and money savings from these programs, as well as the benefits due to reduced air pollution.

These reports on building energy codes, energy efficiency programs and renewable energy development are of great benefit to our non-attainment areas to get credit for reducing ground-level ozone pollution like Dallas, Houston, Galveston and Fort Worth. The calculations are delivered to the Texas Commission on Environmental Quality and the Environmental Protection Agency as part of our “weight of evidence” on how we will lower our ozone levels and comply with tough science-based health standards. This same analysis also assist near non-attainment areas like San Antonio, Corpus Christi, Waco, Austin and El Paso as they come with strategies to avoid being classified as non-attainment areas.

ESL also plays a key role in assessing efforts to adopt new building codes, and helping builders comply with the codes. This is particularly important as we rebuild post-Harvey. Texas just updated our codes to 2015 energy codes and ESL played a key role.

The money for ESL to perform these tasks comes out of the Texas Emissions Reductions Plan account (Account 5071). In practice, ESL’s budget has been cut in half in recent years, from $952,000 in 2009 and 2010, to only $452,000 since, and is now proposed for $443,562. Separately, they have maintained a contract with TCEQ for one study on renewable energy that has been funded at the same amount for a decade. This has had a direct impact on the breadth of the reports, as well as their ability to assist local governments in coming up with energy efficiency building codes.

With the State of Texas now having three non-attainment areas -- San Antonio, Dallas and Houston -- out of compliance with EPA ozone standards, now is the time to restore full funding to the ESL. THERE IS OVER $1.8 BILLION IN THE TERP ACCOUNT.
The Energy Systems Laboratory (ESL) TERP responsibilities

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For the past 18 years, the ESL has supported the State of Texas in meeting the Texas Emissions Reduction Plan (TERP) efforts. The following are the major ESL’s legislative responsibilities under TERP:

Provide EPA recognized calculation methodology and computation of emissions reduction for Texas SIP

The ESL is tasked to analyze & report annually the energy savings and NOx emissions reduction resulting from the renewable energy (RE) programs and the various energy efficiency (EE) programs under the TERP. These programs include: Code-compliant residential and commercial construction; retrofits to federal buildings; Furnace pilot light retrofits; the Public Utility Commission of Texas (PUC) energy efficiency programs; the State Energy Conservation Office (SECO) program for state agencies, political subdivisions and institutions of higher education; residential air conditioner retrofits; energy efficiency for municipally owned utilities program; and the energy efficiency for electric cooperatives program.

The ESL’s calculations methodologies are used by the Texas Commission on Environmental Quality (TCEQ) for reporting State Implementation Plan (SIP) Credits to the U.S. Environmental Protection Agency (EPA) to fully realize emissions Credits for Texas. This work supports the State of Texas in meeting its Federally-Mandated clean air/air pollution reduction obligations.

The ESL has developed a nationally-recognized methodology for quantifying emissions reduction from the various energy efficiency (EE) and renewable energy (RE) programs, which has been approved and adopted by the U.S. EPA for use nationally. The EPA has designated the ESL as a National Center of Excellence on Displaced Emission Reductions for its leadership in emissions calculations (one of only two in the nation!).

- Based on the EPA’s approved methodology, the ESL’s calculation of emissions reduction show that in 2015, as a result of the EE and RE programs, about 25 tons-NOx per day were avoided, which is equal to removing NOx emissions from about 3,200,000 cars for an entire year.

Provide statewide building energy-code implementation assistance

The ESL is responsible for providing statewide building energy-code implementation assistance in residential and commercial construction to State agencies, local municipalities, councils of government, building code officials and building professionals. This responsibility includes: reviewing the stringency of new energy codes and recommending their state-wide adoption; reviewing the stringency of local code amendments; evaluating existing tools for assessing code-compliance and developing other tools and software; and providing energy-code outreach and energy-code training for municipal inspectors and building professionals. The ESL determined that in the period of 2002-2015, the first 15 years of TERP operation, the program of energy codes in new residential construction alone has saved Texas $3.6 Billion (from electricity savings and electric demand reductions) and reduced emissions from the equivalent of 23,000 cars. This total will increase with the adoption and implementation of the 2015 Codes.
Implications of not restoring the
Energy Systems Laboratory (ESL) budget to full funding

The previously authorized budget of $952,000/year for ESL’s mandated responsibilities under TERP has been reduced to $445,000/year in more recent Legislative Sessions (2013-2017), while the ESL responsibilities have been increased, especially with adoption of the new energy codes in 2015, and the rebuilding of our coast. The proposed budget for 2020-21 once again only utilizes $443,562 per year from TERP funds, even though there are more than $1.8 billion available in TERP. With the reduced budget, the ESL is:

• Unable to provide full annual analytical support to State agencies regarding energy savings and creditable NOx emissions reduction calculations for reporting SIP Credits from EE programs. This will have negative impact on Texas’ obligation to the EPA as they implement the 70 PPB standard.

• Lacking adequate trained technical energy code staff to provide technical assistance to Cities, Councils of Governments, builders, city building officials, inspectors and homeowners regarding the latest energy codes. Many of the requests for assistance are being delayed or neglected. The limited assistance that is being provided, due to recent cuts, fails to satisfy the requests. As a result, the enforcement of building energy codes throughout the State is falling behind the code cycle as local building officials await ESL analysis.

• The statutory obligation of ESL to provide above-code amendments (15% above-code) has fallen behind, and there are currently no above-code amendments being offered to local jurisdictions.

• Struggling to continue the support of the IC3, a residential code compliance energy simulation tool, used heavily by the home builders. The IC3 software was developed and is maintained by the ESL for the free use of the entire building industry in Texas as a code compliance energy simulation tool for residential construction has repeatedly been delayed for use with the 2015 energy codes. Without continued maintenance and updates, the enforcement of any current building energy codes throughout the State will fall behind. In addition, the ESL has been unable to provide specific adaptation of the software to comply with local jurisdiction’s code amendments.

• Serious delays on development of the IC4, a much requested commercial version of the code compliance calculator.

• Unable to provide a thorough analysis, recommendation & guidance materials regarding all commercially available software tools for energy code compliance. As a result, the enforcement of building energy codes throughout the State is falling behind the code cycle.

• Unable to provide adequate outreach, education and training on energy codes to the building industry and municipal code officials. The ESL lacks the ability to provide adequate training programs for municipal building inspectors.

RESTORE ESL FUNDING TO PREVIOUS LEVELS BY AUTHORIZING AN ADDITIONAL $500,000 PER YEAR FOR ENERGY CODE COMPLIANCE AND NOX REDUCTION STUDIES. THIS IS PARTICULARLY IMPORTANT IN THE WAKE OF THE HARVEY REBUILD.

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