



South-central Partnership for Energy Efficiency as a Resource (SPEER)

Final Progress Report (Non-RD&D Projects)

March 8, 2018

A. SOPO TASKS

Task 1.0 Weatherization and Intergovernmental Program (WIP)

SPEER will provide assistance and develop strategies for successfully deploying best practices to advance energy efficiency on a regional basis through work with state and local governmental entities. SPEER will work with regional stakeholders and DOE to coordinate and assist the development, management, and implementation of market transformation policies and programs that remove implementation barriers, and create regional synergies and facilitate peer-to-peer exchange.

Subtask 1.1 Public Building Energy Efficiency in Existing Buildings

SPEER will work with political subdivisions throughout Texas and Oklahoma to improve their own energy efficiency in public buildings. This will include assistance to meet energy efficiency goals mandated by both states' Legislatures (Texas= 5% energy reduction per year, Oklahoma=20% reduction by 2020) and to benchmark and disclose energy performance of public buildings.

This task was not funded

Subtask 1.2 Public Building Energy Efficiency for New Buildings

SPEER will work with states and political subdivisions throughout Texas and Oklahoma to establish goals for new public buildings to meet high energy performance standards. Once goals are established, SPEER will assist governmental entities in their efforts to meet the standards.

This task was not funded

Subtask 1.3 Regional Program Consistency

Many cities initiate energy efficiency programs for the general public. SPEER will work with individual cities and regional Councils of Governments (COGs) to promote regional consistency for these programs.

This task was not funded

Subtask 1.4 Communications and Outreach Support

SPEER will coordinate technical assistance, problem solving, and regional partnerships across the region. SPEER will also collect and share state and local success stories and best practices regionally and to other REEOs and further facilitate information exchange.

SPEER began working with cities and utilities to establish the status of the street lighting market in Texas and Oklahoma. In our research we found that local governments were very under educated on how street lighting worked, how it was billed and what they were paying. SPEER worked with numerous stakeholders to educate local governments on the processes for

retrofitting street lighting, on how to audit their street lighting inventory, and how to work with their utilities in regards to street lighting.

SPEER also worked with the Texas Department of Transportation (TXDOT) to determine the status of their street light inventory. We found that TXDOT really valued efficient street lighting and understands the savings and is implementing a tiered process by which they plan to retrofit their entire inventory to LED lights.

Furthermore, SPEER created a Street Lighting Implementation guide to provide a step-by-step instructional document for local governments on how to retrofit their street lights. We also worked with member ESCO companies to create business cases, based on actual street lighting projects, which would assist local governments in making informed decisions on how to retrofit their lights and what the financials look like for an average city. The Implementation Guide and the business cases were distributed to local governments in both Texas and Oklahoma.

Subtask 1.5 Regional Collaboration

SPEER will help facilitate regional forums to engage state and local governments on effective finance mechanisms and tools for advancing energy efficiency projects in jurisdictions across their region and promote better collaboration between utilities, state energy agencies, PUCs, and local governments.

In coordination with Keeping PACE in Texas, the Texas State Energy Conservation Office, and many others, SPEER worked to provide support to local governments and councils of governments so that PACE districts would be adopted. The goal was to encourage the development and rollout a consistent program statewide so that contractors, financial institutions, and property owners would not have to learn multiple different PACE programs. SPEER was a part of the stakeholder group that helped to produce PACE in a Box to help ensure a consistent statewide program was created.

Since 2014, SPEER worked closely with local governments, the State Energy Conservation Office, Keeping PACE in Texas, and many other stakeholders to provide technical assistance in creating a PACE district. We advised and provide support to many cities and counties looking to adopt PACE districts. As of today there are 17 PACE districts, in 13 counties and 4 cities, throughout Texas, with many more working toward adoption. This work has significantly advanced energy efficiency programs through the state.

Task 2.0 Building Technologies Office (BTO)

Subtask 2.1 Energy Codes Coordination:

Coordinate with National Energy Code Collaborative. SPEER will work with national and regional partners such as U.S. DOE's Building Energy Codes Program (BECP), the Building Codes Assistance Project (BCAP), the National Association for State Energy Officials (NASEO), and other REEOs to share and apply lessons learned to advance building energy code adoption and implementation and achieve a high level of compliance in Texas and Oklahoma.

Coordinating with state and national organizations, SPEER established the Texas Energy Code Compliance Collaborative in 2014, which continues to bring stakeholders together quarterly to address

issues of adoption, compliance, training needs, local barriers, and changing policies. This group has been instrumental in the success of code compliance in Texas. A similar collaborative was established in Oklahoma, to address their unique needs. State Energy Offices in both states are actively engaged in this effort.

Subtask 2.2 Adoption Technical Assistance:

SPEER will provide building energy code adoption support in targeted localities in the South-central U.S. SPEER will support this effort through stakeholders such as utilities, energy code ambassadors, energy code trainers, building code officials, state energy offices and the national collaborative. SPEER will also provide assistance to these stakeholders to support adoption through multiple communication channels, and in-person meetings. SPEER will leverage the tools developed by BECP, DOE, and others for adoption assistance of the newer energy codes.

Texas had adopted the 2009 energy codes, which were effective in 2011, but we found that less than half of the local jurisdictions were implementing or enforcing the code. Oklahoma had adopted the 2006 energy codes, but found little evidence of enforcement. We worked to inform code officials, providing code books and assistance. We worked with a collaborative of stakeholders in Texas to get the 2015 energy codes adopted, which became effective in 2016. At this time, 90% of the permitted homes being built in the authorized jurisdictions of Texas are under local enforcement of the current code. We see this as a transformative success.

Oklahoma had adopted the 2006 energy codes, but found little evidence of enforcement. We participated in a technical committee to improve the residential codes to now exceed the efficiency of the 2009 IECC. Commercial code still references the 2006 IBC. We worked to inform code officials, providing code books and assistance.

Because both states are home rule states, SPEER developed an adoption technical assistance program that included providing on-site training, and webinars to provide local code adoption assistance to local code officials. We also established a SPEER Energy Code Ambassadors program certified by the International Code Council, which consists of 32 volunteer professionals, who receive advanced energy code training each year, and provide peer-to-peer support in their local areas. An online Energy Code Toolkit is posted on SPEER's website, providing all the resources to support local implementation and enforcement of the energy code, including references to state law, sample ordinances, and amendments.

Unincorporated areas in both states account for approximately 30% of the building market, but these areas have limited authority for adoption or enforcement, so this is the area that we have identified that will require additional focus.

Subtask 2.3 Compliance Technical Assistance:

SPEER will provide compliance support for building energy codes in the region. By increasing knowledge of the energy codes and advanced building techniques on the part of code ambassadors and energy code trainers, code compliance can be improved to the national goal of 90 percent or greater. SPEER will work with stakeholders and provide webinars, electronic communication and leveraging of the International Code Council (ICC) chapter educational institute network to improve compliance and provide a high level of assistance within the states.

SPEER developed a technical outreach program that included providing on-site training, and bi-weekly best practice webinar series, which provides technical building science information and introduces new technologies. We also established a SPEER Energy Code Ambassadors program certified by the International Code Council, which consists of 32 volunteer professionals, who receive advanced energy code training each year, and provide peer-to-peer support in their local areas. All of these activities provide ICC continuing education credits. An online Code Compliance Toolkit is posted on SPEER's website, providing all the resources to support local implementation and enforcement of the energy code.

Unincorporated areas in both states account for approximately 30% of the building market, but these areas have limited authority for adoption or enforcement, so this is the area that we have identified that will require additional focus to approach 90% compliance.

Task 3.0 Building Technologies Office (BTO) Commercial

Recruit Commercial Building Owners and Managers to Participate in DOE Commercial Building Programs.

Subtask 3.1 Energy Asset Score and Building Energy Data.

SPEER will work with the Commercial Buildings Program to identify potential data sources that can be used to improve DOE tools and recruit local governments, utilities, and large property owners to develop and use efficiency asset rating tools including participation in the next pilot of US DOE's asset rating tool.

This Task was not funded.

Subtask 3.2 Better Buildings Alliance.

SPEER will help to get new partners to participate in the Alliance and reach for ambitious energy efficiency goals. SPEER will work through local and state chapters of national organizations (BOMA, IFMA, etc.), coordinate with utilities and local governments, and potentially attend organizational meetings and conferences to recruit new entities to participate in the Alliance.

SPEER collaborated in 2015, with the three Better Buildings partners in Texas and established a Dallas 2030 District, to encourage, track and report aggregated data on energy efficiency goals. We worked with the PUCT to improve access to energy data by building owners or other third-party aggregators. We produced a report on Green Leases, to demonstrate benefits to building owners, managers, and tenants. We also produced a report on split-benefits and reported case studies for multifamily programs.

No additional funding was provided to continue this effort.

Subtask 3.3 Commercial Combined Property Assessment (CPA).

SPEER will work with BTO and other REEOs to deploy a market-ready CPA tool that can be used by owners, property managers, and technical teams to determine feasibility, depth, and the business case for deep energy retrofits of existing buildings.

This Task was not funded.

Task 4.0 Office of Strategic Programs (OSP)

Subtask 4.1 Regional Energy Efficiency Messaging and Marketing.

SPEER has begun to work on cooperative marketing efforts involving local governments, trade associations, and key industry partners. SPEER will partner with the OSP to increase the market demand for energy efficiency by refining and improving current efforts. SPEER will expand its efforts to create a tool kit of marketing materials for use by the industry, local governments, and utilities in the region, and will provide training to entities interested in using the toolkits. SPEER will also conduct assessments of the effectiveness of the marketing materials and refine them for maximum impact.

This Task was not funded.

Subtask 4.2 Support to municipally-owned utilities and cooperatives.

In addition to providing messaging and marketing materials, SPEER will provide technical assistance to utilities, particularly small and rural utilities (many of which are operated by municipalities or local public utility districts). Funding will expand materials available to these utilities and enhance their use in the region.

This Task was not funded.

Task 5.0 Advanced Manufacturing Office (AMO)

SPEER will coordinate a regional information and education campaign in support of improving the deployment of advanced manufacturing technologies and manufacturing facility best practices; driving a national goal of a 25% reduction in manufacturing energy intensity by 2020. SPEER will work with AMO to support regional education and outreach to regulatory entities, utilities, rate payer funded programs and industrial end users. The support will focus on SPEER priorities as it relates to the State and Local Energy Efficiency Action Network (SEE Action), the Industrial Energy Efficiency and Combined Heat and Power (CHP) Working Group, and with regional groups like the Clean Energy Application Center and Texas Industries for the Future. Specific activities may include educational forums, workshops, stakeholder dialogues or related efforts to promote opportunities for utilities, regulators and industrial end-users to formulate and adopt model policies and programs to support rate-payer funded industrial energy efficiency programs and/or effective CHP policies.

SPEER conducted education and outreach with local governments and economic development entities to promote DOE's programs and resources. Both Texas and Oklahoma exempt industrial, manufacturing, and other large customers from participation in utility incentive programs. We have continued to update AMO on policy issues in our states. We have worked with TCEQ to encourage emissions trading in the Houston Galveston SIP region. We support and collaborate with the CHP TAP to encourage additional investments in district energy and CHP.

Texas' industrial energy use per GDP has dropped from 13,000 Btu per dollar in 2002, to 8,500 Btu per dollar in 2015, due largely to the state's efforts to improve air quality, while maintaining global competitiveness. We worked with Texas A&M Energy Systems Laboratory to develop a framework for a voluntary registry for industrial and manufacturing sector, including measuring and verification process, to capture the benefits of industrial efficiency that is occurring. We anticipated that recognizing their investments and benefits would lead to greater investments. The framework was completed, but lack of future funding to support this effort did not allow us to encourage participation.

We worked with SECO to develop a Texas Industrial Efficiency Coalition, to identify and collaborate with other non-profit that have energy efficiency resources to offer this business sector. This group will continue to leverage resources to promote greater efficiency.

Task 6.0 Project Management and Reporting

SPEER Reports and other deliverables were submitted to DOE in a timely manner.