

New SEM Initiative, Who Dis? How we revised SEM for small customers!

Justin Reed, Entergy Solutions by Entergy Arkansas, LLC
Denice Jeter, Entergy Solutions by Entergy Arkansas, LLC
Santiago Asimbaya, Entergy Solutions by Entergy Arkansas, LLC
Heather Hendrickson, Entergy Solutions by Entergy Arkansas, LLC
Jeannette Staden, Oklahoma Gas & Electric Company
Greg Perkins, Southwestern Electric Power Company

ABSTRACT

Strategic Energy Management and Continuous Energy Improvement (SEM/CEI), implemented by the combined utilities of Entergy Arkansas, SWEPCO in Arkansas, and OG&E in Arkansas, has worked with more than one hundred organizations across the state of Arkansas, helping customers save over 300 million kWh through low- and no-cost behavioral improvements. Participants include universities, large industrial manufacturing companies, and large school districts.

According to the U.S. Small Business Administration (SBA), 99% of American businesses are small, yet only 17% of CEI/SEM programs offer a way for these organizations to participate. To expand SEM/CEI to more customers, the team developed Core SEM/CEI—a new measure designed to deliver the same high-quality coaching and workshop resources for executing low- and no-cost behavioral improvements to smaller facilities such as private schools, rural school districts, churches, grocery stores, and single-shift manufacturing companies. These organizations have less time and fewer resources compared to larger organizations, but they still deserve to save energy and money through low- and no-cost behavioral and operational measures.

Core SEM/CEI enables small- to medium-sized customers to pursue simple energy-saving opportunities that extend beyond equipment upgrades, with an emphasis on the behaviors of the people who interact with the equipment.

Through April 2026, more than thirty customers are participating, and their combined total kWh savings have exceeded one million.

INTRODUCTION

Since 2019, the Arkansas Strategic Energy Management and Continuous Energy Improvement (SEM/CEI) team has supported numerous large school districts, universities, sawmills, cities, and large commercial electric customers throughout the state with implementing many low- and no-cost behavioral improvements at their respective sites. The cumulative savings for all participating utilities since SEM/CEI's beginning have exceeded 300 million kW, which continues to grow year after year. However, over time, the SEM/CEI team recognized that a substantial number of electric customers across Arkansas, such as private schools, rural school districts, churches, grocery stores, and single-shift manufacturing companies, could also benefit from these improvement measures.

Beginning in early 2023, in order to expand the reach of SEM/CEI to additional electric

customers, the team developed Core SEM/CEI: a streamlined approach that provides the essential tools for improving energy efficiency without the long-term commitment of traditional SEM/CEI. In traditional SEM/CEI, participants attend monthly check-in meetings and provide site data monthly in order to update energy models. With Core, the check-in meetings occur quarterly, and site data does not need to be provided, only project updates.

Within our traditional SEM/CEI offerings, a customer attends monthly check-in meetings with the SEM/CEI team, facilitates internal energy team meetings, and provides production data monthly to update their energy-saving electricity model. All these aspects are important to becoming efficient in saving energy within the SEM/CEI framework. However, over time, the SEM/CEI team began to ask ourselves: *How can we revise our traditional SEM/CEI offerings to work with Arkansas' many rural school districts and small businesses?*

Core assists customers with implementing simple energy-saving opportunities that go beyond equipment upgrades, instead focusing on the people that are interacting with the equipment daily. The Core team provides one-on-one coaching and roundtable workshops, along with engineering expertise and technical support for topics such as compressed air, building automation systems (BAS), and lighting as a few examples. Along the participant's "Core Journey," the Core team conducts quarterly check-in meetings, guides participants through the list of opportunities at their respective sites and develops a game plan to support their success.

Table 1. Comparison of Program Structure: Core and SEM/CEI

	Meeting Frequency?	Site Data Needed?	Energy Assessment?	Energy Model Required?	Workshops Provided?
Core	Quarterly	None needed	Yes	No	Yes, twice per year
SEM/CEI	Monthly	Provided monthly (if they are a manufacturing company)	Yes	Yes	Yes, usually five times per year

This article will highlight both the successes and challenges experienced by Core participants as they worked to accomplish this demanding task, while also showcasing the key tools the Core team used to support them along the way.

Before examining the accomplishments, tools, and obstacles, let us first discuss the ~~most~~ crucial factors that equate to a successful Core participant: the Executive Sponsor and the Energy Champion.

Leadership Support

To become successful while participating in Core, a customer must collaborate with their internal team to build an energy-efficient culture throughout their organization by gaining and

maintaining a dedicated support system from the leadership team.

The Core team's foundation is built on a strong Energy Champion, who is the energy efficiency leader at their respective company or school. The Energy Champion oversees projects and delegates tasks to their co-workers and employees while also keeping a pulse on how their site is performing in their energy savings mission. In addition to the Energy Champion, the Executive Sponsor is the most important person to recruit for the Core team.

An Executive Sponsor is someone within the leadership team who will not only help the Energy Champion with approving projects that come with a price tag, but also by encouraging other employees to join the Energy Champion in saving energy and helping to build a strong Energy Team around them. As proof of our current cohort of Core participants, we can attest that our most successful ~~customers~~ are those who maintain supportive, encouraging, dedicated, and reassuring Executive Sponsors.

Struggling to locate your Executive Sponsor? Ask yourself, who among your leadership team is the most enthusiastic about achieving your energy efficiency goals? Who among your leadership team is committed to improving your company's productive output, while also looking for low- and no-cost ways to save energy?

Challenges

This section will detail the challenges of implementing Core, and the following section will examine exactly how the Core team helped overcome those roadblocks to achieve success.

“That’s the way it’s always been done.”

This phrase has been mentioned to me consistently over the years by several different organizations. When someone has worked in the same place for an exceptionally long time—30, 40, or even 50 years, they have their scheduled processes and their extremely specific way of doing things. *How can we encourage them to improve and enhance “their way of doing things”?* *How can the Core team provide them with the support they did not know they needed?* *How can their leadership team support them internally with the tools that they are missing from their arsenal?*

The Core team looks to provide those answers by finding the missing pieces to those puzzles. Core is not a sprint by any means; it is absolutely a marathon. Core is a journey that looks to prove that, over time, change is possible and not out of reach. For example, engineering support takes a deep dive into a manufacturing company’s production process and provides guidance on how to adjust practices in an energy-efficient way that boosts productivity, eases employees’ workloads, and ensures machines are not working as hard. The Core team will provide examples of different process improvements and how they can benefit the Energy Champion in their current role, but also how the Energy Champion’s organization can benefit as a whole.

“What’s in it for me?”

Outside of monetary savings by completing energy savings projects, a very common

challenge that the Core team faces is when a potential Core participant might wonder what's in it for their company or school to participate in an energy efficiency campaign. At first, they might not understand exactly why this is beneficial and what is in it for them. They might wonder to themselves: *What are the benefits outside of saving energy that comes along with participating in Core? "What's in it for me" (WIIFM) by joining Core?*

Also, the leadership team for a particular company or school might be looking for ways to spread the word across the state of Arkansas about how successful they have been in their Core journey. Positive publicity can be incredibly beneficial for a rural school district or a small business and participation in Core can be a very useful tool to garner that publicity. Again, they are asking themselves what is in it for our organization to participate in Core? The way that we have answered that question is by creating positive and broad-reaching public relations opportunities for those customers after they have achieved success in Core.

Constant Turnover

Unfortunately, many Core participants have experienced constant turnover within their organizations, making it challenging to keep current employees informed about the company's energy efficiency goals, as well as to properly onboard new employees.

For an organization to become successful in saving energy, one of the key elements is maintaining a consistent and ever-growing team around supporting our Energy Champion. *How can we build an energy efficient and sustainable culture when our employees leave our organization shortly after being hired?*

In the sections to follow, we will look at several of the best practices that our Core SEM/CEI participants have utilized to counter all these challenges and turn them into positive opportunities for their organization.

Limited Support Staff & Time Constraints

In conclusion, the biggest challenge that a Core participant or on-site Energy Champion faces during their energy efficiency journey is the lack of a large internal energy team that they can work with to accomplish their energy efficiency goals by completing projects around the site. In most cases, our Core participants will have only one team member on site who will be working on these projects due to their limited staffing capacity.

Obviously, along with the extremely limited support staff comes the extremely limited time constraints that our Energy Champions must combat to achieve their goals. A particularly important component to remember is that these on-site Energy Champions have multiple tasks in their regular day-to-day job duties, some of which may not have anything to do with energy efficiency, so many of them are having to somehow find the time to work on these tasks.

Benefits of Core SEM/CEI

To combat these challenges, the Core teams have developed and utilized different tools at their disposal, including energy assessments, opportunity registers, and more, which will be detailed in the following sections. However, the predominant motivator of Core for a rural school

district, or a small industrial company would, of course, be (you guessed it), money.

Incentives

To further motivate customers to be more energy efficient at their sites, the combined electric utilities of Entergy Arkansas LLC, SWEPCO (an AEP Company) in Arkansas, and OG&E in Arkansas, decided to provide milestone incentives to their customers during their participation in Core. The figures provided below detail the different milestone incentive structures for each utility:

Table 2. Core Milestone Incentive Structure for OG&E in Arkansas

Milestone	Criteria	Incentive	Total Incentive
Complete energy scan	Customer agrees to participate & has completed energy scan	\$500	\$4,250
Attend both workshops	Customers have attended both Core SEM workshops	\$500	
Annualized energy savings meet or exceed 2.5% of annual energy usage	Customer has implemented Core projects greater than or equal to 2.5% of annual energy usage	\$3,250	

Table 3. Core Milestone Incentive Structure for SWEPCO (an AEP Company) in Arkansas

Milestone	Criteria	Incentive	Total Incentive
Complete energy scan	Customer agrees to participate & has completed energy scan	\$500	\$3,500
Attend both workshops	Customers have attended both Core SEM workshops	\$500	
Annualized energy savings meet or exceed 2.5% of annual energy usage	Customer has implemented Core projects greater than or equal to 2.5% of annual energy usage	\$2,500	

Table 4. Core Milestone Incentive Structure for Entergy Arkansas, LLC

Milestone	Criteria	Incentive	Total Incentive
Complete energy scan and three efficiency projects	Customer agrees to participate & has completed energy scan	\$500	\$4,250
Attend both workshops	Customers have attended both Core CEI workshops	\$500	
Annualized energy savings meet or exceed 2.5% of annual energy usage	Customer has implemented Core projects greater than or equal to 2.5% of annual energy usage	\$3,250	

Electric Bill Savings

As the Core journey progresses over the years of participation, the electric customers across Arkansas who are achieving energy savings will also experience a more impactful benefit of participating: lower monthly electricity bills. The impact of receiving lower electric bills each month for a rural school district or small manufacturing company can mean the difference between hiring a new employee, purchasing new school computers, or even investing in new energy-efficient equipment for their respective roles. Once energy efficiency projects are completed at a participant site, our internal engineering team gets to work to calculate the total kWh saved from completing all of those individual projects. If those participants saved at least 2.5% of their annual energy usage, then incentives are paid out to them by the utility. Our team looks at their annual billing and gathers what their target number is to accomplish that milestone.

Tools

For the Core team to understand what types of energy efficiency opportunities are possible for a participant site, an in-person assessment is completed by our experienced engineering support staff. With their expertise, our engineering team can identify and record all current energy efficiency opportunities that are possible for each participant site that they visit.



Figure 1. Energy scan photo with participant and engineer

These visits are incredibly vital for a participant’s success in Core because they now understand which opportunities they can (and should) tackle at their respective sites, as well as the impacts of making those improvements. Additionally, our outside staff allows the on-site maintenance teams to view their sites from a fresh, new perspective. The Core team has seen many cases where the participant has worked at the same company or school for 40 years and are likely missing opportunities that are right in front of them. Our team brings their fresh perspective via “energy eyes” to each site that they visit, which helps change the viewpoint of “That’s just the way it’s always been done.”

Upon completion of the energy assessment (AKA energy scan), our engineering staff will create a prioritized list of opportunities for the on-site staff to follow to be successful in saving energy for the next several years. We call this list an Opportunity Register.

Opportunity Register

After the energy scan is complete, the engineering team compiles their list of findings into a spreadsheet called the Opportunity Register. Pictured in *Figure 5* is an example of a Core Opportunity Register. It not only contains a list of opportunities and where they are located at the site, but it also provides the participants with our engineer’s calculated savings potential per opportunity, along with a specified priority. *In other terms, which opportunities are going to give us the biggest bang for our buck? Which opportunities should we tackle first?*

The Core team is responsible for keeping this register up to date over the duration of the site’s participation in Core. *What is the status of Project A? What are the action items to get that project off the ground? Is this a 2026 project or 2027? What assistance does the participant need from the Core team to complete Project A?*

Recommended Project	Existing Condition / System Description	Project Details and Next Steps
Encourage effective use of window shades to reduce heat losses/gains through windows.	Window shades are present but are erratically used without efficiency in mind.	This can be especially effective for reducing early morning solar gain on the east and south sides if blinds are closed each night, but also helps reducing heat losses in the winter. Work with energy coach to plan an engagement campaign around window shades. Be sure to recognize staff and departments that are doing a great job with window shade use.

Figure 2. Example of a Core Opportunity Register

Report Card

Figure 6 displays the Core monthly report card, which is a one-page snapshot that captures the up-to-date energy savings accomplishments and projects thus far for a specific customer. We created this report card tool to give our Energy Champions a simplified report that they could easily show to their leadership team and co-workers. We wanted to keep this tool as simple as possible so that someone could view it and easily identify the status of the site's energy savings mission. As you can see, there are many different factors at play in this report card.

- First, the pie chart shows the status of completed Core projects thus far.
 - *How many energy efficiency projects have we completed and how many did we still need to complete?*
- Secondly, the middle column represents the site's kWh savings goal and how much kWh savings have been achieved.
 - *How close are we to achieving our energy savings goal?*
- Thirdly, the Project Completion List is vital for the site's Energy Champion and overall energy team to be aware of which specific projects have been completed.
 - *When exactly was Project X completed and how much kWh was saved by completing that project?*

For our Core participants, these report cards have been incredibly helpful during their internal energy team meetings to provide a status update for the entire squad. This report card also gives them a solid understanding of exactly how much farther they need to go to receive their new milestone incentives from the utility.



Figure 3. Core Report Card Example

Non-Technical Workshops

Each year, the Core team conducts virtual workshops comprising multiple topics. The goal of these workshops is to bring all our participants together and to give them an understanding of best practices, tools, tips, and outside-the-box ideas to enhance their current energy efficiency strategy. For this article, we will focus on two of these workshops which focus on building a healthy energy-conscious workplace culture and ways to engage with your employees to build that culture.

The first workshop we host is called our “Employee Engagement Workshop.” It provides the Core team with an opportunity to speak directly with our cohort of participants about ways to build an energy team, as well as how to encourage, communicate, and reward those energy team members for their hard work and dedication to their energy efficiency mission. Our participants found this workshop to be extremely beneficial because it provides them with a specific game plan on how to improve their current energy culture and build a sustainable future.

The second workshop we host is our “Report Out Workshop.” It is always scheduled near the end of the year as this workshop allows our participants to have the floor and share with the entire cohort all their successes, challenges, and their upcoming plans to build upon their current accomplishments. The reason this workshop is so beneficial for our participants is they can learn directly from other Energy Champions about how they accomplished their energy efficiency goals, but also how they built and maintained their organization’s energy culture. *How did you specifically overcome your struggles? Did you experience any peer pushback when you attempted to alter your overall process?*

Technical Workshops

In addition to the Employee Engagement and Report Out Workshops, the Core team also provides specific engineering technical workshops for our participants. Some of the topics include compressed air systems, motors & Variable Frequency Drives (VFDs), chilled water systems, BAS, etc. The aim is to educate our participants in these areas and to answer any questions that they might have by providing them with an experienced engineer who specializes in that particular area. Some members of an organization’s internal energy team may be more

interested in learning more about VFDs than they are about employee engagement, so these workshops allow us to broaden our reach and strengthen the participant's energy team in another fashion.

Many participant sites contain energy savings opportunities around these technical topics that are extremely specific and often very original. These workshops allow our participants to learn and ask questions to engineering specialists who have spent years training in these areas. The knowledge that they can gain from attending is extremely valuable to their organization's energy efficiency success.

We are excited to continue conducting these workshops; due to the overwhelmingly positive feedback from our participants. Below are a few responses regarding workshops from our customers:

- "I found it very useful to attend and [I'm] just thinking through what my organization would do."
- "[I] Enjoy hearing the various examples for types of energy waste was helpful."
- "Interesting workshop, good information."
- "Great work! Love what y'all do."
- "[I] Like seeing the small changes others have made that made a difference for them."

Golf Check Presentations

Lastly, another tool that the Core team utilizes to keep participants motivated throughout the years is the use of big "golf check" photo opportunities with the utility representatives at the participant site. These are captured once they have achieved energy savings and received incentives for their hard work from the utility. Additionally, another major benefit is that these checks provide an incredible positive public relations opportunity for each site since the photos are included in a public press release for all to see online through various social media channels. *Figure 7* below highlights a recent golf check presentation for one of our Core participants in Arkansas.



Figure 4. Example of Core SEM/CEI Golf Check Presentation Photo

Evaluation Metrics

Before we dive into the results of Core SEM/CEI, here is a recap of some evaluation metrics thus far:

- Duration of participation ranges from 1 month to 3 years depending on the participant
 - Our team is continuing to recruit new participants throughout 2026
- Energy savings are calculated for each Core participant by our internal engineering team once projects are completed at their respective sites
- Customer Satisfaction has been outstanding over the 3 years that Core has been established. Below are a few direct quotes from participants:
 - “Thank you so much for your efforts to make this happen, helping our school district save money, and also to help us conserve energy.”
 - “Every dollar we save on utilities is another dollar we can invest directly into other vital areas of our company. Participating in Core CEI not only helped us lower our energy usage but gave us the tools that will make a lasting difference. These savings strengthen our ability to provide safe, stable, and supportive environments for the people who depend on us.”

Results

Since the inception of Core in 2023, the combined utilities of Entergy Arkansas LLC, SWEPCO (an AEP Company in Arkansas), and OG&E in Arkansas have awarded \$45,549 combined to date in Core milestone incentives to multiple different customers whom completed low and no-cost behavioral and operational efficiency projects and that number will continue to grow for many years to come. That incentive also does not include the additional bill savings that each participant sees when completing Core projects at their respective sites, which is certainly a massive benefit for these customers.

Over the past three years combined, our participants have also saved 1,133,268 kWh. Additionally, according to the online EPA (Environmental Protection Agency) *Greenhouse Gas Equivalences Calculator*,

1,133,268 kWh also equates to the following:

- 661 metric tons of Carbon Dioxide equivalent
- 74,421 gasoline-powered passenger vehicles driven for one year
- 61,555,672 number of smartphones charged
- 142 homes' electricity use for one year

Currently, there are 25 Core participants spread throughout the state of Arkansas ranging from private schools, churches, rural school districts, small businesses and grocery stores, which all were very eager to join Core when first contacted to see if they were interested in potentially completing energy saving projects.

Even though our team has made incredible progress over the years in recruiting and assisting participants with saving energy, there are still many customers in the state that could benefit from participating in Core so our focus will be to continue recruiting in the future.

Conclusion

With the following necessary tools at their disposal, our Core SEM/CEI participants throughout the state of Arkansas are set up for success in their energy savings endeavors:

- Engineering Support & Site Assessments
- One-on-One Coaching Sessions
- Core Report Card
- Non-Technical and Technical Workshops
- Incentives from the Utilities
- Core Opportunity Register

By using these tools, they can build their internal energy team, gain insightful knowledge about how their site can run more efficiently, and receive an extra incentive for their hard work, which in turn could be used to fund a future energy efficiency project. Once a sustainable energy team is built, they can delegate tasks, receive essential feedback from other employees throughout the site, and organize employee events to promote energy awareness.

Since the Core SEM/CEI offering was established in 2023, our team has witnessed our participants overcome numerous challenges to achieve their organization's sustainability goals, and we absolutely expect that to continue for the foreseeable future. Like our participants, the Core SEM/CEI team is also always continuously improving and looking for new ways to help our customers to succeed and achieve their mission. As the Core SEM/CEI team, we are continuously looking for ways to continuously improve ourselves. Our goal for 2026 and in the future, is to continue recruiting new participants so that Core SEM/CEI can benefit more rural school districts and small businesses throughout the state of Arkansas.

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