



**Analysis:
The Relationship between Key Attributes for Programmatic Design
and
State GESPC Success
(Trends and Observations)**

ENERGY SERVICES COALITION
May, 2018

Jim Arwood Executive Director

Acknowledgements

The Energy Services Coalition (ESC) is indebted to the hard work and vision of the ESC State Liaison Team. The ESC is grateful for their work in updating the 10 Key Attributes to Programmatic Design, and in developing the ESC Needs Assessment that was administered in the spring of 2016, 2017 and 2018. Our thanks go to Jim Arwood, Dale Hahs, Jim Ploger and Eddie Riddle, and the ESC Market Transformation Committee chaired by George West. And a very big thank you goes to the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy for their support through Award Number DEEE0006784-0000.

Finally, we thank the State Energy Performance Contracting Program Managers for taking the time to complete the Needs Assessment instrument and in so doing providing a snapshot of their state's support for Guaranteed Energy Savings Performance Contracting, and the successes they have achieved.

Executive Summary

Guaranteed Energy Savings Performance Contracting (GESPC) is a significant agent of marketplace change. GESPC enables building owners to use future energy savings to pay the up-front costs of energy-saving projects, eliminating the need to dip into capital budgets.

At a time when state and local governments find themselves in an increasingly budget-constrained environment, requiring better and judicious use of funds, more and more are turning to GESPC as the ideal mechanism by which a variety of goals relative to improved building energy efficiency and reduced energy consumption can be achieved in a fiscally prudent manner.

This document demonstrates the value of GESPC statewide programs. From 2016 through 2018, the ESC conducted a review of 34 GESPC programs nationwide and presented awards to the top ten outstanding programs. These programs demonstrated a clear separation from the remaining states and were therefore named Energy Stewardship Champions, a selection based on a combination of Key Attribute adoption (programmatic design elements) and the amount of the state's GESPC investment over the previous three-year period. The balance of the participating states (24) in the review were grouped in a second tier of states.

The Key Attributes upon which the Champion states were selected is widely associated with the ESC. However, the ESC didn't create this list independently. Instead, over a number of years the ESC observed the presence of these attributes in statewide programs throughout the country and noted their contribution in making these programs successful. In 2007 the ESC began drawing attention to these attributes as being the preconditions for building and maintaining program success and achieving meaningful results.

As part of the Needs Assessment review process that was conducted over the past three years, it was shown that Energy Stewardship Champion states produced more GESPC investment than the combined total from the other 24 participating states. In reflection, we realized as time goes on the programs with more attributes have more success as they manage expectations among the energy services company providers and their processes are honed.

Relationship between Key Attributes and State Success

Guaranteed Energy Savings Performance Contracting (GESPC) has grown in popularity over the past three decades and offers a number of benefits that speak to the concerns of many public institutions in dealing with increased energy costs and the need to replace old, inefficient, high maintenance systems, while lacking the necessary funding, expertise or resources. Beneficial aspects of a GESPC include delivering cost-effective energy improvements to public buildings and infrastructure that enables building owners to use future guaranteed energy savings to pay for up-front costs of energy conservation measures, eliminating the need to dip into capital budgets.

A time-tested component of this process and the successful projects that result in the “MUSH” market (municipalities, universities, schools, and hospitals), is qualified oversight provided through a statewide program that supports the best interests of the state agencies and local units of government.

Since its inception in 1999, the Energy Services Coalition (ESC) has played an important role in supporting and facilitating the development and implementation of guaranteed energy savings performance contracting programs in states throughout the country. Much of this work can be traced to the expertise and experience of its members and relationship with states that allowed the ESC to observe the successes achieved by state programs and analyze those programs and their attributes. From this observation, and analysis, a list of best practices emerged, and in contrast we observed the pitfalls that sometime derailed efforts.

From the Best Practices model program the concept of Programmatic Key Attributes for incorporation into state GESPC programs was conceived in mid-2007. With support of the U.S. Department of Energy, the ESC began to study and subsequently compile the elements of state GESPC programs that were the most effective and efficient. The study revealed 10 key attributes that had proven to accelerate the success of GESPC programs in every way; speed, reliability and increased the uptake of GESPC investments in the state and local marketplace.

The Energy Services Coalition created the Accelerated GESPC Initiative in 2007 to promote adoption of the best practices model. The best practices model was comprised of a series of interrelated concepts and actions that has since become known as the ESC’s 10 Key Attributes to Programmatic Design. The 2007 initiative was launched with support from the U.S. Department of Energy, and in partnership with the National Association of Energy Services Companies, National Association of State Energy Officials, and National Conference of State Legislators.

Two years after the launch of the initiative, 17 states participated in the first ESC review of GESPC program design. Each were asked the number and type of Key Attributes embraced, and the amount of investment that had been realized.

In 2011, the number of states participating in the second ESC programmatic attribute review increased from 17 to 22. A third, and more in-depth effort to document Key Attribute adoption and their relationship to project investment, was begun in 2016 and completed in 2018. The number of participants in the most recent review, also supported by the U.S. Department of Energy, was double those that partook in first review nearly a decade before.

The first survey (2009) revealed the average number of programmatic Key Attributes incorporated per state was 4.54 out of 10. Two years later, in 2011, the Accelerated GESPC Initiative had helped to

elevate the nation's understanding of the concept and the average of Key Attributes per state had increased to 5.54. By 2018, the number of Key Attributes adopted per state averaged 6.67.

While the ESC promotes its 10 Key Attributes as the foundation upon which to build and expand a state-wide program, the true measure of success is in the achievement of meaningful results. Since the inception of the Accelerated GESPC Initiative there is a noticeable parallel between the adoption of programmatic Key Attributes and investments in GESPC projects in states that follow the model. Because of the complexity and length to develop a GESPC program, launch and deploy it and subsequently initiate an Investment Grade Audit, negotiate the scope of work that frames the retrofit, complete construction and honor and verify the results, time becomes a variable that impacts success and makes a direct correlation to the uptake of one or more key attributes difficult to evaluate.

Perhaps more telling is the number of key attributes among the top ten state programs and the subsequent amount of investment reported in one or more of the four MUSH market sectors in those states. These ten states (Colorado, Delaware, Hawaii, Kentucky, Massachusetts, New Mexico, North Carolina, Ohio, Virginia, and Washington) were recognized in 2016 as Energy Stewardship Champion states by the ESC based on a combination of their program's adoption of key attributes and the amount of private sector investment in GESPC for their state. These ten states averaged 8.5 key attributes and a total investment of \$5,339,352,153* -- more than the cumulative total reported by the other 24 states providing data to the ESC. (*Note: The variable of time as cited above, the breadth of the opportunity that is a resultant based upon population, the historic relationship between the state and its local units of government and reporting and other factors impact the amount of total investment reported and may account for some of the differences reported by Champion states and Tier Two states.)

The Champion states have similarly designed programs containing the characteristics of the 10 Key Attributes, yet analysis of these state programs have identified individual state's efforts whose policies and innovative approaches to implementing a particular attribute is considered a best practice. We offer these examples below. Further in this document we have provided a statistical illustration of the preponderance of these Key Attributes implemented by the Energy Stewardship Champion and Tier Two states.

Enabling Legislation

From the inception of the Accelerated GESPC Initiative over a decade ago, enabling legislation has been recognized as a catalyst for the remainder of list of key attributes. It is also the attribute most widely accepted. In 2009, 15 of the 17 states that participated in the ESC review of state programs, had passed enabling legislation that allowed for GESPC. Today, laws authorizing the legitimacy for the public sector to enter into a guaranteed energy savings performance contract exists in 49 out of 50 states.

Aside from enabling legislation paving a pathway for this alternative means of procurement, effective rules within statute have proven to protect the public's interest and provide program participants clarity in specific areas such as the savings guarantee, retention of savings, empowerment/who can use GESPC, capital infusion, eligible financing period, measurement and verification and reporting requirements.

In 1985, Ohio became the first state in the nation to pass legislation allowing for the use of this alternative financing mechanism when it adopted its landmark GESPC legislation. Since its passage, nearly \$1.5 billion in GESPC projects have been completed in Ohio.

The Commonwealth of Kentucky's statute requires energy service companies not only provide an energy savings guarantee, but also an annual reconciliation statement that documents through a prescribed Measurement and Verification protocol the annual energy savings achieved versus the guarantee. Total GESPC investment in Kentucky exceeds \$750 million since legislation was first enacted in 1996.

These state statutes do not mandate GESPC use, instead they provide rules that must be followed for when GESPC is used. While differing slightly from state to state, GESPC enabling legislation has proven over and over again to be a popular bipartisan resolution to making cost-effective energy related improvements in public buildings and infrastructure. Legislation has passed unanimously in many states demonstrating it is a truly bipartisan solution. Examples include:

- In 2000, Kansas lawmakers approved GESPC legislation 118-0 in the House, and 40-0 in the Senate;
- Three years later, in 2003, Nevada lawmakers approved their state's GESPC legislation by a vote of 42-0 in the Assembly, and 21-0 in the Senate;
- State representatives voted 39-0 in the Delaware House, and 20-0 in the Delaware Senate to approve enabling legislation in 2005.
- In 2010, Georgia voters passed a constitutional amendment (1,480,273 to 954,448) in support of guaranteed energy savings performance contracting as a way for the state to pay to install energy-saving devices.

Established Gubernatorial Support

Gubernatorial support is a key attribute that recognizes leadership from the top and conveys priorities to state agencies and institutions, directs GESPC consideration and provides consistency that allows programs to build upon their success.

Even prior to the ESC's 2007 Accelerated GESPC Initiative, the support of the governor and their administrative staffs was identified as having significant impact on GESPC success at the state level. The Western Governors' Association (WGA)— an association of 19 states and three US-flag Pacific islands — released a report in the summer of 2006 that recognized GESPC and the statewide programmatic approach adopted by Kansas as a best practice. The Kansas program, adopted in the early 2000s, enjoyed strong gubernatorial support and was one of the states that set the stage for what is known today as the ESC's Key Attributes.

At its height in 2012, the Kansas statewide GESPC program was one of the top three programs in the country. It incorporated pre-qualifying ESCOs, standardized documents, had a consensus of support from state legal, finance and procurement authorities, a self-funding fee mechanism and technical assistance and project oversight. Governor Kathleen Sebelius issued a 2007 Executive Order that directed the use of GESPC as the first option for consideration to make energy upgrades in state facilities that needed energy upgrades. As a result, Kansas jumped to second in the ESC Race to the Top among states for GESPC investment per capita.

But gubernatorial support is not always evident. At the time of the first ESC review of state programs in 2009, gubernatorial support was documented in only four of the 17 participating states.

In 2011, 13 of 22 governors from states participating in the ESC review were supportive of the GESPC process. This support was determined by the issuance of executive orders, press releases, or by attending ribbon cuttings for projects. Among today's top ten statewide programs (ESC Energy

Stewardship Champion States), gubernatorial support has always exceeded the support advanced in non-champion states. While champion states were not identified until the 2016 review process, looking back at the 2011 programmatic reviews, five of seven participating champion states reported support from their administration compared to eight of 15 non-champion states. In 2016, 8 of 10 champion states reported gubernatorial support compared to seven of 24 non-champion states. Examples of support include:

GESPC in Virginia has enjoyed backing from two consecutive administration, as Gov. Kaine and Gov. McAuliffe both issued executive orders endorsing the concept. Virginia has implemented more than 70 GESPC projects in public facilities. The projects support Gov. Terry McAuliffe's 2014 Virginia Energy Plan on reducing energy consumption in state buildings and his Executive Order 31 which directed state agencies to reduce their electricity consumption in state buildings by 15 percent by 2017. Virginia's cumulative GESPC investment since 2001 is \$860,459,946.

Hawaii, with the full-support over the years from its executive branch, has completed more than \$507 million of energy performance contracts since 1996. Hawaii's GESPC investment has been championed recently by Governor David Ige in press releases and public announcements. Before Ige's administration, in 2008, Governor Lingle launched the Hawaii Clean Energy Initiative (HCEI) aiming for 70 percent of Hawaii's energy to come from clean sources by 2030 (40 percent from renewable energy and 30 percent through energy efficient measures). This year, 2018, marks the 10th anniversary of the HCEI, and since its launch Hawaii's GESPC investment in energy efficiency has increased from \$102 million (1996 through 2010) to more than \$507 million (2011-2018).

Consensus Decision-makers

GESPC is generally described as a non-traditional procurement and finance process. Because of its innovative framework, statewide programs have developed and maintained GESPC specific processes and tools, and garnered cooperative support among appropriate authorities of government. These can include, but are not limited to procurement, budget and finance, and legal. Collaboration with other market-specific state and local authorities/agencies ensures adaptability in multiple market sectors. Example:

Ohio uses a complete standardized contract set of instruments that must be used for GESPC projects in any state facility. These documents have been reviewed and approved by the appropriate legal, finance and procurement authorities in the state.

Pre-qualified ESCOs

Pre-qualified providers insure that those delivering services to public agencies have already competed and demonstrated their experience, expertise and financial responsibility to support their performance and that of their savings guarantee. Purchasing agreements can be extended to local units of government and in many states this list of providers, endorsed by the state, can help jumpstart local projects. Example:

In 2012, the New Mexico ESC Chapter formed a committee to conduct a bottleneck analysis that identified barriers to GESPC implementation in the state. The bottleneck analysis identified the need for a pre-qualified vendors list. This action was implemented by the State and New Mexico now has a list of pre-approved ESCOs that has accelerated the selection process for project vendors.

Program Funding

Stable program funding has always been a key to program success. Adequate funding provides lasting support for the administrative and technical oversight roles of the GESPC program. An innovative approach in situations where state funds are not available, is a self-funding program concept that charges minor fees on GESPC projects. This fee for technical and oversight services provides long-term funding that supports the cost of the program. Example:

In 1984, Washington was one of the first states to develop a program to use performance contracting in the state. Washington used a self-funding mechanism to support a program comprised of a team of technical assistance providers for their work on projects in state agencies, higher education institutions, public schools and local governments. Since the program's inception, nearly \$1.3 billion of projects have been implemented in the state and notably, zero state appropriations have been used to support this remarkably successful program.

Program Administration and Technical Support

Effective deployment of GESPC requires qualified oversight and technical assistance to support the best interests of the state agencies and local units of government. In some states, this program management and project support is provided by knowledgeable, dedicated state energy office staff. In others it is an outsourced contract with technical providers (engineering firms or private contract consultants), or a combination of the two approaches. Examples include:

The Massachusetts Department of Energy Resources GESPC program staff work with local governments to implement GESPC projects. To date, Massachusetts has implemented \$865,349,091 in GESPC projects at the local level where DOER strongly encourages the use of 3rd Party technical providers. Alternatively, the state's Division of Capital Asset Management provides technical assistance for state agency and higher education projects.

Colorado initiated its GESPC program in 1988 and over the years has demonstrated the effectiveness of ESC's Programmatic Key Attributes, from strong legislative and gubernatorial support, to pre-qualified ESCOs with pre-approved contracts, to a successful public-private partnership with its ESC state chapter, and project oversight for government agencies. In May, 2016, Colorado hit a significant milestone when the state joined four other states in the ESC's Race to the Top "Half-Billion Dollar Club," reaching the milestone of \$500,000,000.00 in implemented GESPC projects.

ESC Chapter (Public Private Partnership)

Successful programs have a key component of outreach and education delivered directly to the general marketplace. In many cases this outreach is provided through an Energy Services Coalition State Chapter of which the state program administrator and other public officials participate with private sector partners. This coalition of interested energy stakeholders fulfill a key role in having regional workshops, presentations, and other events that provide an educational forum on how the processes and procedures work within the state. Examples include:

Colorado has one of the largest ESC State Chapters in the country with 37 members that meet on a regular basis to promote the benefits of, and provide education on the widespread use of energy performance contracting in public and private facilities. To date, more than 140 public jurisdictions have executed nearly 200 GESPC contracts, from administration buildings, schools, courthouses, jails and correctional facilities, to libraries, health clinics, veterans housing, ballparks and other community facilities.

The State of Delaware and the Delaware ESC State Chapter have partnered to promote GESPC solutions to reduce utility costs and energy and water consumption in public facilities and infrastructure. To date, more than \$125 million in energy savings projects have been implemented in Delaware as a result of a GESPC. The Delaware ESC Chapter is known for its outreach and education efforts and events. Since 2014, the Chapter has staged one of the nation's largest state conferences focused solely on GESPC.

The New Mexico ESC Chapter developed a standardized power-point presentation for its members to use. The standardized presentation has been used by various Chapter members, both public and private, to deliver the same pre-approved message in various settings throughout the state. It has also allowed the Chapter to participate in more events as the messaging has already been vetted and is available for all members to use as participants in conferences, panels and small groups.

Benchmarking, Tracking and Reporting

GESPC programs manage energy data through benchmarking, tracking and reporting measures. Managing data is critical to gauging program effectiveness. Tracking and reporting project progress through the full-term of the contract, including effective measurement and verification reports, demonstrates project and program success through measurable results. Examples include:

The Commonwealth of Kentucky's statute requires an annual reconciliation statement that documents through a prescribed Measurement and Verification protocol and the annual energy savings achieved versus the guarantee.

The Commonwealth of Massachusetts benchmarks energy usage in its buildings and requires reporting and measurement and verification on all GESPC projects.

North Carolina provides oversight of performance contracting projects in the state, and benchmarks energy usage in K-12 facilities, community colleges and technical colleges. The state also tracks GESPC projects in all state buildings, colleges and universities. To date, North Carolina has executed more than \$500 million in private sector GESPC investments.

Recognition

In 2015 the ESC undertook an in-depth review of its 10 Key Attributes and adopted a new attribute. The ESC Board of Directors identified a recognition/award program as a powerful strategy to reinforce the importance and benefits of saving energy in public facilities. The board recognized the efforts of the Michigan ESC Chapter as an exemplary example of how to highlight successful project as a means to help GESPC gain acceptance and encourage others to take similar action.

Since 2011, the Michigan ESC Chapter has held an annual awards dinner and partners with the Municipal League on awards and press releases. The projects selected have garnered a great deal of attention and have been featured in various media publications. The media exposure has created greater awareness for guaranteed energy savings performance contracting and the process – and at the same time have highlighted public officials that have been good stewards of the public trust.

In addition to an awards program, other states have adopted ways of generating recognition for GESPC. Examples include:

Massachusetts has held events for political dignitaries when projects are completed.

Hawaii State Energy Office has worked closely with the ESC to promote GESPC through announcements and presentations to the legislature that highlight its notable #1 ranking in the Energy Services Coalition Race to the Top Award illustrating greatest cumulative investment per capita.

Statistical Analysis: Key Attribute Trends and Observations

The Energy Services Coalition State Liaison team spent three years from 2016 to 2018 working with states to review GESPC program design. The section below offers an assessment of the trends and observations derived from the completed Needs Assessment documents with participation from 34 states.

During this time, the ESC State Liaison Team worked with states who voluntarily shared their state's approach to GESPC. The information provided below is a result of an analysis of the data collected as part of that effort. Respondents were broken into two tiers based on their responses. Ten states were grouped into the Tier One category (Champion States). These states had programs that were model programs in the areas of leadership and program design. These Tier One states also reported more projects, and project investment per capita, than the 25 Tier Two states (the balance of the 34 states).

The Needs Assessment responses from the participating states provided several key insights into state Guaranteed Energy Savings Performance Contracting programs, a list of which follows:

- The more Key Attributes a state has achieved the more prepared a state is for success. From the collection of data and analysis of success achieved -- it is clear that the more Key Attributes that are in place the higher reported amounts of project implementation (measured in dollars) had been achieved. Success is additionally influenced by the time that a state program with these attributes has been operational.
- Tools and resources can be put in place – but people make the difference. We recognize that the Energy Stewardship Champion states all have well-known and respected program administrators with the background, skills and experience to assist project participants in achieving the highest value while supporting a fair and equitable working business model for the providers.
- There is a significant disconnect between State Programs and local units of government with managing success and tracking achievement. In the Energy Stewardship Champion states the state has established support or a working relationship with local units of government using GESPC so as to know when projects are initiated and completed and they track GESPC achievements.
- While GESPC programs have interagency impact, responses indicate that there is little if any interagency, planning, support or interaction regarding the budgeting, planning and support of the GESPC program effort.
- Leadership can connect areas of government and eliminate silos. The need for continued leadership and support for GESPC programs prompted the development of transition planning and messaging. Where governors and state administrators are not kept informed and abreast of the significant achievement and continued potential impact of GESPC, program support can fall away risking the continuity that multi-decade programs require to be successful. Champion state programs have been around for a long time and their results illustrate it. A few of these champion states are approaching, or exceeding, \$1B in repurposed investment.

- The amount of time from project announcement to completion is much longer than anecdotal observation had indicated particularly when looking at new programs or inaugural projects. The impact is that you can stand up a new program with all the attributes, people and leadership that are known to make programs successful – but the results may not materialize for several years.
- Many of the people who are supporting GESPC today, were not in place when programs were being created and therefore have little contrast of how tools and processes have helped or hindered project development.
- The rigor of tracking the receipt of project success as reported in annual measurement and verification reports has fallen off dramatically over time. Some programs report that they have succumbed to ignoring the requirement altogether even though it remains a legislative requirement and perhaps an obvious component of supporting a guarantee of savings achieved. Further inquiry indicates a troubling trend toward the rationalization of “stipulated savings” as a means to abate the cost and effort to scientifically validate the persistence of savings achieved.

In addition to these key takeaways, the data provided insight into the trends for developing and maintaining programs throughout the country and the adoption and implementation of the ESC 10 Key Attributes of GESPC Program Readiness. The ESC recognizes the 10 Key Attributes as preconditions for program success and the trends provide more detail in how states have built programs upon these attributes.

What follows is an attribute by attribute summary of the observations and trends identified through this effort.

1. Enabling Legislation

Effective legislation works well to protect agencies and the state’s interest. Good legislation can be defined as not limiting states in what they can do – good legislation provides clear language about the savings guarantees, eligible financing periods, measurement and verification (M & V) requirements and scope of work.

What has become clear from the periodic examination of enabling legislation over the past decade is that legislation needs to be considered a work in progress and future changes can enhance programs.

Trends

All respondents have legislation. In a nearly \$7 Billion a year¹ industry, now several decades old, all respondents had some form of enabling ESPC legislation. Still legislation is only the foundation for allowing GESPC to advance. Past evidence has suggested, and logically so, that enabling legislation is a pre-requisite for GESPC. This analysis illustrates that the characteristics of legislation draw some variability between GESPC programs but not nearly as much as some of the other contributing attributes that follow. When asked about the benefit of one piece of legislation to cover all market segments or separate legislation to support each market sector we learned:

1 U.S. Energy Service Company (ESCO) Industry: Recent Market Trends; Ernest Orlando Lawrence Berkeley National Laboratory

Market Sectors covered by legislation	
Energy Stewardship Champions	Tier Two
<ul style="list-style-type: none"> ○ 60% cover schools ○ 60% cover local govt. ○ 60% cover universities ○ 60% cover k-12 ○ 40% one statute for all sectors 	<ul style="list-style-type: none"> ○ 50% cover schools ○ 45% cover local govt. ○ 33% cover universities ○ 42% cover k-12 Districts ○ 42% one statute for all sectors

Energy Stewardship Champions break along similar lines as all states when it comes to legislation specific to each market sector. Six of the ten (60%) Energy Stewardship Champions have separate legislation for each market sector, while four of the ten (40%) have one statute that covers all sectors.

Observations: We’ve learned that the specifics of separate legislation have value in reinforcing that the legislative authority language is not a generalization that may or may not be interpreted for a particular market segment, but when it is written to the specific segment there is reinforcement of applicability.

Terms of Agreement – Contract Years	
Energy Stewardship Champions	Tier Two
<ul style="list-style-type: none"> ○ 0%: <5 years ○ 0%: 5-10 years ○ 50%: 10-20 years ○ 10%: Over 20 years ○ 40%: Life-cycle 	<ul style="list-style-type: none"> ○ 0%: <5 years ○ 0%: 5-10 years ○ 57%: 10-20 years ○ 13%: Over 20 years ○ 22%: Life-cycle ○ 8%: No response

All Energy Stewardship Champions States have 20+ years contract terms or life-cycle.

Observations: Longer contract terms allow the short-term payback measures to support deeper energy retrofit measures that may otherwise go unfunded and maximizes the leverage of the GESPC effort and its benefits.

Other Legislative Components: Reporting Requirements	
Energy Stewardship Champions	Tier Two
○ 70% require M&V reporting	○ 37% require M&V reporting

Other Legislative Components: Agency Retain Excess Savings	
Energy Stewardship Champions	Tier Two
○ 80% allow agencies to retain excess savings	○ 29% allow agencies to retain savings

Other Legislative Components: Requires A Savings Guarantee	
Energy Stewardship Champions	Tier Two
○ 100% require a savings guarantee	○ 71% require a savings guarantee

While legislation among states differs slightly when it comes to contract lengths and applicable sectors, there is clear differences between Champion states and Tier Two states when it comes to some of the other nuances of legislation. Champion states tended to have legislation that provides clear language about the savings guarantees, measurement and verification (M & V) requirements and retention of savings.

Observations: Other legislative components (reporting requirements, retention of excess savings, and required guaranteed savings) have demonstrated impacts on a key measure of success: meaningful results as measured by GESPC investments in states.

What we learned is that the Key Attributes in and of themselves do not guarantee success, but they are the foundation upon which to build a program. The true measure of success is in the achievement of meaningful results.

2. Gubernatorial Support:

Gubernatorial support conveys priorities to state agencies and institutions, assigns responsibility and directs GESPC consideration prior to capital budget requests.

Trends

While there is a general understanding of GESPC at the highest level in most states, active support for the program and/or projects is low. Gubernatorial engagement is the exception rather than the rule, with the typical activities in support of GESPC involving press releases or an Executive Order.

When asked about the gubernatorial engagement in support of GESPC we learned:

Gubernatorial Engagement	
Energy Stewardship Champions	Tier Two
<ul style="list-style-type: none"> ○ 60% Know benefits of GESPC ○ 40% Issued press releases ○ 20% Issued Executive Orders ○ 30% Receive reports ○ 20% Attended dedication ○ 80% Continuous support 	<ul style="list-style-type: none"> ○ 29% Know benefits of GESPC ○ 17% Issued press releases ○ 4% Issued Executive Orders ○ 0% Receive reports ○ 0% Attended dedication ○ 29% Continuous support

Energy Stewardship Champions in most cases represent long-time sustainable programs and these programs have enjoyed continuous gubernatorial support that has transcended change in administrations. Of the Energy Stewardship Champion states 80% reported continuous gubernatorial support for GESPC and their programs versus 29% of Tier Two states.

Observations: Continuous gubernatorial support from one administration to the next is critical to maintain state program consistency and allow state programs to build upon their success. Where governors and state administrators are not kept informed and abreast of the significant achievement and continued potential impact of GESPC, program support can fall-away -- risking the continuity that programs require to be successful.

What we learned is strong gubernatorial leadership can connect areas of government that need to work interdependently for highest level program success. Silos and conflicts of interpretation and program responsibility impede program success or preclude it altogether. The need for continued leadership and support for GESPC programs necessitate the development of transition planning and messaging.

3. Consensus Decision Makers

GESPC is a non-traditional procurement and finance process. A successful GESPC program will recognize this and will have developed and maintained cooperative support among appropriate authorities of government. These can include, but are not limited to:

- Legal experts to review standardized contracts to ensure they conform to state laws.
- Involvement and approval of standardized documents speeds up the review process, adds credibility and protects the interest of the state.

Trends

Program developers and industry proponents have recognized the significant advantage of having state authorities well versed in the general principles of GESPC and how it impacts their role and responsibility in the workings of the state. Many legal authorities prefer to vet the contract instruments one time producing a standard set rather than review each projects terms and conditions independently. This serves to save time, build consistent and fair treatment and mitigate risk for the state.

A disappointing trend is for programs to connect with state authorities one time at the development of a new program and then ignore the considerable value state authorities have in the workings of process and the program confidence that they can exude when kept abreast of program success and benefits achieved.

When asked about the various decision-makers and their involvement in support of a state’s GESPC program, we learned:

Legal	
Energy Stewardship Champions	Tier Two
○ 70% Understand GESPC	○ 37% Understand GESPC

State Procurement	
Energy Stewardship Champions	Tier Two
○ 70% Understand GESPC	○ 37% Understand GESPC

State Finance	
Energy Stewardship Champions	Tier Two
○ 80% Understand GESPC	○ 29% Understand GESPC

Energy Stewardship Champions enjoy strong support from key decision-makers in legal, procurement and finance in numbers far above Tier Two states.

Observations: It is extremely important to educate authorities of their role in the GESPC process – as these agencies can create complexity and the more complexity they create the less success a state will have with its program. While GESPC programs have inter-agency impact, responses indicate that there is little, if any, inter-agency planning, support or interaction regarding the budgeting, planning and support of the GESPC program effort

What we learned is that in many states there is a disconnect between State GESPC Programs and the rest of state government (Procurement, Legal, Finance and Landlord) and it is rare to see all working together to accomplish the end goal. This commonly results from personnel changes over the years and the loss of institutional knowledge and relationships that were established to launch the original program effort. Without a firm understanding of the long-term benefits to the state budget, reduction in deferred maintenance, elimination of emergency equipment or systems replacement, state administrators/finance may see GESPC management as an unworthy hassle. When public servants see the benefit to the state and its constituency, they are more likely to be supportive in their recognition of benefits achieved. Nearly three-fourths of all Tier Two states appear to have lost, or never established, a working relationship with the complementary agencies and therefore remark they simply don't know if state procurement and finance know, or understand, GESPC.

4. Program Administration

Effective deployment of GESPC requires qualified oversight and technical assistance to support the best interests of the state agencies and local units of government. In some states, this program management and project support is provided by knowledgeable, dedicated state energy office staff. In others, it is an outsourced contract with technical providers, or a combination of the two approaches.

Trends

The trend across the country is moving toward 3rd Party Owner's Reps. When the support is provided by in-house staff, oversight has become more of a team effort instead of one dedicated person as was the trend a decade ago. An alarming trend is that few in-house staff have had any formal training or support to prepare them for their role as GESPC Program Manager.

When asked whether a state provides project oversight we learned:

Program Administration	
Energy Stewardship Champions	Tier Two
○ 90% have project oversight	○ 50% have project oversight
○ 40% have 3 rd party owner's reps	○ 29% have 3 rd party owner's reps
○ 70% extend oversight to local units of gov't	○ 12% extend oversight to local units of gov't

Energy Stewardship Champions unanimously offer some level of oversight. Nine of the 10 Champion states indicated that they either have a full-time (1) dedicated staff person, or multiple staff (5) assigned to oversight roles. In the three Champion states the oversight person also is assigned other program responsibilities. The expertise of the program administrator in Champion states is very similar to all states with 50 percent having some type of formal training. But there is a significant difference between the program reach with 70% of Champion states extending their programs to local units of government

versus 12% in Tier Two states. Third party owner’s reps is another area where the experience of Champion states differs from Tier Two states (40% vs 29%).

Observation: The most common form of oversight is a multiple team-player approach in which the state program has various staff with different expertise assigned to areas for which they are proficient. Full-time staff assigned to program oversight is rare, as most states don’t have the luxury of having full-time staff available to support only GESPC and in most cases even part-time program managers have other programs for which they are responsible.

No state should be without on-staff oversight even if there is a 3rd party owner’s rep under contract to provide technical assistance. Hiring a contractor to support the technical nuances of GESPC should never preclude the need for on-staff personnel to be engaged in project negotiation, clarification or programmatic design.

There also is a significant disconnect between State Programs and local units of government with managing success and tracking achievement. In the Energy Stewardship Champion states the state has established support or a working relationship with local units of government using GESPC so as to know when projects are initiated and completed and they track GESPC achievements.

What we learned is that tools can be put in place – but people and their experience make the difference. Energy Stewardship Champion states all have well-known and respected program administrators with the background skills and experience to assist project participants in achieving the highest value while supporting a fair and equitable working business model for the providers. Knowledgeable program administrators help ensure that project assumptions, application of standard engineering practices, price reasonableness and measurement and verification plans all align with the needs of the program participant and strike a balance of expertise allowing more equitable negotiations.

There is also a gap in training among Energy Stewardship Champion state program managers and Tier Two states. Most state program managers have no formal training in GESPC, and a growing number of states are employing 3rd party owner’s reps to provide oversight. Of all states responding many nearly a quarter elected not to answer the question pertaining to training.

Administrator Training	
Energy Stewardship Champions	Tier Two
o 40% CEM trained	o 25% CEM trained
o 10% ESC trained	o 17% ESC trained
o 40% No formal training	o 46% No formal training
o 10% No response	o 12% No response

5. Standardized Documents

Some form of standardized documents is used in nearly all states as they reduce the need for significant legal review if they have been approved by the legal department in advance – thus reducing the length of the development cycle and that can make for more projects. Standardized documents also provide for significant risk mitigation for the state, institutions of higher learning, and local units of governments and provide certainty to the market that terms and conditions meet all statutory requirements.

Trends

States have standardized contracts, guides and resources for state agencies, but the industry pushes away from using them in the local units of government. States typically cannot or do not mandate the use of state standardized instruments for units of local government but avail them for use. The industry commonly encourages units of local government to use ESCO supplied agreements and while not prohibited by statute, units of local government rarely contrast the instruments to determine if it is their best interest.

We learned that a significant number of states use standardized documents, and the analysis also provided a glimpse at what standardized instruments were being used:

Standardized Documents	
Energy Stewardship Champions	Tier Two
<input type="radio"/> 100% use one or more standardized documents	<input type="radio"/> 75% use one or more standardized documents
<input type="radio"/> 40% provide/use standardized documents in local units of government	<input type="radio"/> 17% provide/use standardized documents in local units of government
<input type="radio"/> 70% post documents on-line	<input type="radio"/> 54% post documents on-line
<input type="radio"/> 90% use standardized RFQ document	<input type="radio"/> 54% use standardized RFQ document
<input type="radio"/> 50% allow contract modifications	<input type="radio"/> 29% allow contract modifications

Energy Stewardship Champions are unanimous in their use of standardized documents. All 10 Champions states use one or more standardized contract document.

Observations: Many of the people who are supporting GESPC programs today, were not in place prior to their programs being created, and therefore have little contrast of how tools and processes have helped or hindered project development.

Additionally, not all states share the value of standardized program tools with local units of government. This may put them at a distinct disadvantage of not being able to learn from past projects and/or benefit from the effort of the state to ensure that contracts and other instruments abide by the procurement, finance and construction statutes, guidance and quality standards of their state.

What we learned is that 12 of the 34 responding states allow modifications to their contracts which of itself may be worthy of additional study to identify what areas of a standardized contract is considered reasonable to modify.

6. Approved ESCOs

An area that most states with successful GESPC programs have in common is a pre-approved list of ESCOs. This is an area that helps accelerate the process and provides a first step effort to manage project quality control. It is essential that the providers entering into GESPC agreements have a complete understanding of what will be required in the form of design/build project fulfillment tied to a performance guarantee.

Trends

It has been demonstrated in states that have pre-approved ESCO lists that pre-qualification shortens the time from RFP to a shovel in the ground. But the lists must be structured properly and provide clear criteria such as how to be added/removed from the list. Pre-qualified lists also eliminate the need for local units of government from having to issue costly RFPs. A state list has proven that it not only provides for high-quality of providers, but reduces costs for local units of government to use. Finally, for most states, the nation’s standard models for solicitation and response substantively fulfill procurement requirements.

Pre-Qualified Vendors	
Energy Stewardship Champions	Tier Two
○ 90% have prequalified providers	○ 46% have prequalified providers
○ 50% of states with prequalified vendors support a secondary selection process	○ 33% of states with prequalified vendors support a secondary selection process

Nearly all Energy Stewardship Champions have pre-approved vendor lists as a result of competitive procurement resulting in a cadre of qualified providers.

Observations: This attribute assures the credibility and capability of those who serve the public markets. The Pre-Qualified RFP requires the respondent to acknowledge their organization’s experience, team’s expertise, and the financial wherewithal to support the guarantee.

What we learned is that even with the pre-qualified vendor list, half of those states support a secondary selection process. This provides preapproved providers to select from while still supporting the need to allow a project participant selection of a partner best fitted to the project needs.

7. Program Funding

Stable program funding has proven key to lasting support for state programs. Several different funding sources are in use around the country from state general funds and grant funds, to fee-based support and tragically a lack of funding support. A program that is supported by state appropriations is perceived as independent and unbiased.

Trends

States that have adequate and continuous program funding are also the most successful programs in terms of projects and investments.

Program Funding	
Energy Stewardship Champions	Tier Two
○ 60% have adequate and continuous program funding	○ 17% have adequate and continuous program funding
○ 40% have sufficient funding	○ 9% have sufficient funding
○ 20% are self-funded	○ 4% are self-funded

Energy Stewardship Champions are more likely to have adequate funding either through their general fund (40%) or through a self-funding (20%) mechanism when compared to Tier Two states (9% and 4%).

Observations: There is a need for cost/benefit analysis so that program participants can see the demonstrated value of GESPC and the role the state is playing in advancing this alternative means of procurement and financing. This analysis could be used in support of state appropriations or the incorporation of a fee-based schedule for a GESPC program. There have been recorded cases of the industry pushing back against self-funded programs portraying the need for funding support to be a veritable commission for the program administration office or making the claim that “proceeds from one project supporting another project as unfair”. Regardless of the funding source -- a program needs money and if it doesn’t have a state appropriation it may need to explore the option of collecting a fee to pay for program support. Noting the trend and value of project oversight, reliable and consistent funding is critical.

It is clear that program funding continues to be an issue and that adequate and continuous funding is an important component for successful programs.

8. Awards and Recognition

In 2015, Awards and Recognition was added to the ESC list of 10 Key Attributes for Programmatic Design. It is a new area and as such few states have efforts that either publicize or recognize project success.

Trends

States engaged in this activity vary from a formal awards program through the ESC Chapter, to issuance of press releases recognizing various stages of project success (announcement, construction, and savings). Formal Awards programs: Promote success; Lead by example; Recognize results.

Awards and Recognition	
Energy Stewardship Champions	Tier Two
○ 50% have an awards program or some type of recognition	○ 13% have an awards program or some type of recognition

Of the states with a recognition program, several types of award programs exist (multiple programs in some states):

- 3 recognize savings over guarantee
- 2 recognize completion of construction
- 4 recognize project announcement
- 4 link recognition to federal program
- 2 have public events

Energy Stewardship Champions are part of a growing trend to recognize successful projects either through press releases or some other type of project announcement or awards.

Observations: States have reported that the awards effort can assist dramatically in the collection of case studies and past project list collection as a part of the nomination of projects for award consideration. We learned that if the programs and industry are not routinely celebrating successes we are missing an opportunity to draw positive attention to the benefits of GESPC.

9. Benchmarking and Reporting

Most GESPC programs manage project tracking through some home grown tracking or reporting system. Managing data is critical to gauging program effectiveness. Tracking and reporting project progress through the full-term of the contract, including effective measurement and verification reports, demonstrates project and program success through measurable and sustainable results. Separately, Benchmarking can be used to identify comparative energy consumption to see the achievement of energy efficiency efforts or to identify apparent opportunities for improvement.

Trend

The trend across the country is that while many states may collect data, there is no consistent means of collecting data on projects or even what is being collected. In many cases state programs only track the name of the project and its implementation value missing the opportunity to collect planned savings and energy, water, economic and environmental impacts. Also, while nearly half the states participating in the needs assessment require an annual M&V report that leaves more than half that don't require one.

Benchmarking and Reporting	
Energy Stewardship Champions	Tier Two
○ 50% benchmark one or more market sector	○ 21% benchmark one or more market sector
○ 70% track data or projects in one or more market sector	○ 54% track data or projects in one or more market sector

Of the states that benchmark or report, the number that cover various market sector include:

- 6 benchmark state buildings
- 6 benchmark, track, report on cities
- 8 states benchmark, track, report on community college/tech college
- 4 benchmark universities
- 11 require Annual M&V Reports

Energy Stewardship Champions track data or projects that account for the hundreds of millions of dollars of GESPC work completed in their states.

Observations: Requiring and receiving M & V reports annually is less prevalent than desired to support the guarantee, and in some cases statutorily required. Note specifically that 70% of the Energy Stewardship Champions track project data in multiple market sectors. For many states, however; there is a disconnect between State Programs and local units of government managing success and tracking achievement virtually sacrificing the recognition of the total impact of energy, water, economic and environmental benefits that comes from GESPC projects and programs.

What we learned is that the rigor of tracking the receipt of project success as reported in annual measurement and verification reports has fallen off dramatically over time. Some programs report that

they have succumbed to ignoring the requirement altogether even though it remains a legislative requirement and perhaps an obvious component of supporting the guarantee of savings achieved. Further inquiry indicates a troubling trend toward the rationalization of “stipulated savings” as a means to abate the cost and effort to scientifically validate the persistence of savings achieved.

10. ESC Chapters

Successful programs have a key component of outreach and education delivered directly to the general marketplace. In many cases this outreach is provided through an Energy Services Coalition State Chapter of which the state program administrator and other public officials participate with private sector partners.

Trends

This coalition of interested energy stakeholders has highest value to all participants when it is employed to provide an educational forum on how the processes and procedures work within the state. The Chapter model also provides a forum for productive and open discussion regarding the multiple perspectives of challenges that the program may face.

Chapters	
Energy Stewardship Champions	Tier Two
o 50% have an active state ESC Chapter	o 37% have an active state ESC Chapter

Half of the Energy Steward Champion’s states have an ESC Chapter that helps with education and outreach of the marketplace.

Observation: ESC Chapters are present in more than half the states in the country; however, not all Chapters are active. Chapter activity ebbs and flows and tends to be dependent upon the public-sector involvement. When ESC state chapters harness the power of working together in a public and private partnership to achieve the common goal of more and successful projects, benefits are achieved for all. Additionally, educational messages are far more readily received by the public/private coalition of energy experts with a common message over individual industry participants and vendor bent presentations that increase skepticism.

Concluding remarks

The ESC will be watching the trends and making periodic updates to the status of the nation’s GESPC programs. As with many programs, the attention given to the program development and success is directly proportional to the value of the benefits achieved. While GESPC is not a solution for all, it has and continues to illustrate the remarkable power of a public/private effort capable of easing the strain on public budget demands while providing comprehensive infrastructure improvements supported by the recapture of investment supported by a guarantee.

Disclaimer: This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.