

State Needs Assessment Analysis

ENERGY SERVICES COALITION

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Tom Walther ESC President

Jim Arwood Executive Director

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The Energy Services Coalition State Liaison team offers this document reflecting the trends and observations derived from the completed Needs Assessment documents by two-thirds of the states.

Introduction

During 2016, the ESC State Liaison Team worked with 33 states who voluntarily participated to share their state's approach to Guaranteed Energy Savings Performance Contracting (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. 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 total per capita, than the 23 Tier Two states (the balance of the 33 states). The Tier One states were presented with the ESC's Energy Stewardship Champions Award at the 5th Annual Market Transformation Conference held August 22-23, 2016 in Louisville, Kentucky.

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. ESC state programs have been around for a long time and their results illustrate it. A few of the ESC states are approaching \$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 tools, 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 prior to programs 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 guaranteed 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 narrative 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 the program.

<u>Trends</u>

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:

	Market Sectors covered by legislation				
	Energy Stewardship Champions	Tier Two			
0	60% cover schools	o 55% cover schools			
0	60% cover local govt.	o 55% cover local govt.			
0	60% cover universities	 41% cover universities 			
0	60% cover k-12	o 50% cover k-12 Districts			
0	40% one statue for all sectors	 45% one statue 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.

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



	Terms of Agreement – Contract Years			
Energy Stewardship Champions			Tier Two	
0	10% : <5 years	0	0% : <5 years	
0	0% : 5-10 years	0	0% : 5-10 years	
0	50% : 10-20 years	0	57% : 10-20 years	
0	10%: Over 20 years	0	13%: Over 20 years	
0	30%: Life-cycle	0	22%: Life-cycle	
		0	8%: No response	

Energy Stewardship Champions in all but one state has either 20-year contract terms, or some combination of 20-years or life-cycle terms. Ninety percent of Champion States have 20+ years 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		
o 70% require M&V reporting	o 17% require M&V reporting		

	Other Legislative Components: Agency Retain Excess Savings			
Energy Stewardship Champions		Tier Two		
0	80% allow agencies to retain excess savings	o 17% allow agencies to retain savings		

	Other Legislative Components: Requires A Savings Guarantee				
Energy Stewardship Champions			Tier Two		
0	100% require a savings guarantee	0	61% 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. <u>Gubernatorial Support:</u>

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		
0	60% Know benefits of GESPC	0	30% Know benefits of GESPC		
0	30% Issued press releases	0	9% Issued press releases		
0	20% Issued Executive Orders	0	4% Issued Executive Orders		
0	20% Receive reports	0	0% Receive reports		
0	20% Attended dedication	0	0% Attended dedication		
0	80% Continuous support	0	30% Continuous support		
ÎI.					

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 30% 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 prompted 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.
- o 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 be 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			Tier Two	
0	70% Understand GESPC	0	35% Understand GESPC	
0	0% Doesn't understand	0	13% Doesn't understand	
0	30% No response/don't know	0	52% No response/don't know	

	State Procurement/Finance				
	Energy Stewardship Champions		Tier Two		
0	80% Understand GESPC	0	22% Understand GESPC		
0	10% Doesn't understand	0	4% Doesn't understand		
0	10% No response/don't know	0	74% No response/don't know		

Energy Stewardship Champions enjoy strong support from key decision-makers in legal and procurement 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. This may tie to state success. 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:

	Energy Stewardship Champions		Tier Two
0	100% have project oversight	0	65% have project oversight
0	50% have 3 rd party owner's reps	0	17% have 3 rd party owner's reps
0	70% extend oversight to local units of gov't	0	17% extend oversight to local units of gov't

Energy Stewardship Champions unanimously offer some level of oversight. All 10 Champion states indicated that they either have a full-time (1) dedicated staff person, or multiple staff (6) assigned to oversight roles. In the other 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 17% in Tier Two states. Third party owner's reps is another area where the expertise of Champion states is significantly different than Tier Two states (50% vs 17%).

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 the 23 Tier Two states responding more than one-third elected not to answer the question pertaining to training.

	Administrator Training				
	Energy Stewardship Champions Tier Two				
0	50% CEM trained	0	22% CEM trained		
0	10% ESC trained	0	4% ESC trained		
0	40% No formal training	0	39% No formal training		
		0	35% 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 the number of states using standardized documents and a few of the standardized instruments being used:

	Standardized Documents				
	Energy Stewardship Champions		Tier Two		
0	100% use one or more standardized	0	74% use one or more standardized		
	documents		documents		
		0	26% don't use standardized documents		
0	40% provide/use standardized documents in	0	13% provide/use standardized documents in		
	local units of government		local units of government		
0	80% post documents	0	43% post documents		
0	90% RFQ	0	48% RFQ		
0	56% allow contract modifications	0	26% 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 33 responding states allow modifications to their contracts which of itself may be worthy of additional study to identify what areas of a standardized contact 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 Lists:

	Pre-Qualified Vendors			
	Energy Stewardship Champions Tier Two			
0	90% have prequalified providers	0	39% have prequalified providers	
0	50% of states with prequalified vendors support a	0	89% of states with prequalified vendors support	
	secondary selection process		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 is a valuable attribute to assure 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		
0	40% have adequate and continuous program funding	0	9% have adequate and continuous program funding		
0	10% have sufficient funding	0	9% have sufficient funding		
0	20% are self-funded	0	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 9%).



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			
0	50% have an awards program or some type of recognition	22% 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):

- 4 recognize savings over guarantee
- o 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 don't even require one.

	Benchmarking and Reporting					
	Energy Stewardship Champions		Tier Two			
0	50% benchmark one or more market sector	0	22% benchmark one or more market sector			
0	70% track data or projects in one or more market	0	48% track data or projects in one or more market			
	sector		sector			

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

- 6 benchmark state buildings
- o 4 benchmark, track, report on cities
- 9 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 70% have a state ESC Chapter	o 22% have a state ESC Chapter	

More than two-thirds of Energy Steward Champion's states have an ESC Chapter that helps with education and outreach of the marketplace.

Observation: ESC Chapters are present in nearly 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

With continuing support from the Cooperative Agreement, the ESC will be watching the trends and making annual 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.

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