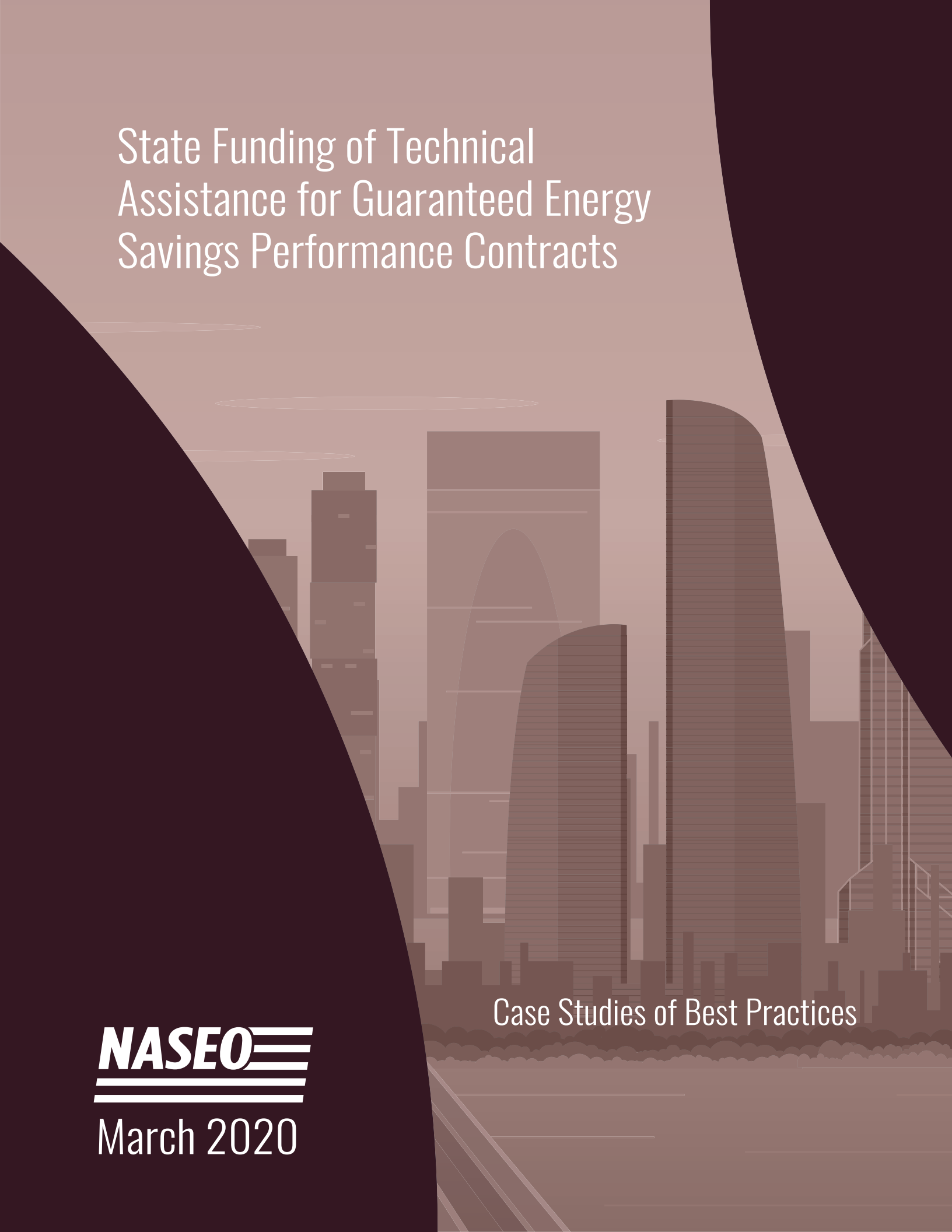
State Funding of Technical Assistance for Guaranteed Energy Savings Performance Contracts



Case Studies of Best Practices

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Introduction

Robust technical assistance on guaranteed energy savings performance contracts (GESPCs) in the public sector is critical to driving program success. A 2018 study of state-level ESPC programs found that 90% of the most successful state GESPC programs, in terms of ESPC investment and other attributes, provided qualified oversight and technical support through a statewide ESPC program.[1] This brief provides an overview of the successful technical assistance efforts and funding mechanisms used by Colorado, Virginia, and Washington, and discusses the technical support provided throughout the GESPC process. The information that follows is designed to help State Energy Officials who are focused on establishing or updating a GESPC program, have an interest in better understanding how to sustainably fund such programs, or want to better understand the types of assistance other states provide.

While all states in the nation have passed legislation authorizing GESPC, and many states have energy service companies (ESCOs) active within their borders, most states have had difficulty in sustaining statewide oversight of state and local GESPC and providing technical assistance to facility managers and other key actors who are seeking improvements to their facilities using this mechanism. GESPCs are complex, and state and local government personnel may not possess the specialized technical expertise and resources necessary to successfully navigate the GESPC process without support from experts who can help ensure that their upgrades are completed with the savings guarantee intact.[2] While in-depth technical assistance requires sustained levels of funding, there are many ways to sustainably support GESPC technical assistance efforts so that GESPC customers can have the confidence to engage with ESCOs and pursue deeper retrofits to increase their facility energy efficiency and help meet state lead-by-example goals.

Building off of the insights gained from a roundtable co-hosted with the U.S. Department of Energy (DOE) in Cleveland, Ohio in August 2018, NASEO interviewed three states with strong GESPC programs to better understand how these programs are funded in order to glean best practices that other states can learn from and utilize.[3] NASEO used the insights gained, along with supplemental research, to develop case studies on how these successful programs fund their technical assistance efforts, as well as the types of services they provide. The case studies cover three models for funding technical assistance: DOE State Energy Program funding, legislative appropriations, and a self-funding mechanism that charges an administrative fee to each project. Each model

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1 Energy Services Coalition. 2018. Analysis: The Relationship between Key Attributes for Programmatic Design and State GESPC Success. Accessed January 7, 2020. http://www.energyservicescoalition.org/Data/Sites/1/documents/resources/needs-assessment-analysis-of-relationship-between-key-attributes-and-state-success-2018.pdf. For more information, see: U.S. DOE, 2019. "Energy Savings Performance Contracting for State and Local Governments: Strategies for Successful Measurement and Verification of Savings." https://www.energy.gov/eere/slsc/downloads/energy-savings-performance-contracting-state-and-local-governments-strategies

2 For more information on GESPC savings guarantees, see: U.S. DOE, 2019. "Understanding Your ESPC Savings Guarantee." https://www.energy.gov/eere/slsc/downloads/understanding-your-espc-savings-guarantee

3 NASEO Staff would like to thank U.S. DOE's Office of Weatherization and Intergovernmental Programs for their guidance and support throughout the development of this document. NASEO would also like to thank Dale Hahs of the Energy Services Coalition, Mirka della Cava, Taylor Lewis, and DeLynne Southern of the Colorado Energy Office, Nicholas Polier of the Virginia Department of Mines, Minerals, and Energy, and Doug Kilpatrick of the Washington Department of Enterprise Services for their assistance in developing this brief. This brief was authored by Sam Cramer in January 2020.

has produced strong GESPC programs that other states can emulate as they work to improve or restart their own GESPC programs.

This brief provides an overview of the technical assistance efforts and funding mechanisms to support assistance that are used by Colorado, Virginia, and Washington. It discusses the technical support that each state provides throughout the GESPC process, from assistance with the investment Grade Audit (IGA) for each facility to measurement and verification (M&V) of the savings achieved by each building.[4] It also provides a description of the funding model used by each state to support its efforts to guide facility managers through the GESPC process.

Colorado: Front-Loaded Investment of Technical Assistance Pays Long-Term Dividends

The Colorado Energy Office (CEO) has managed a GESPC program for the past two decades to provide comprehensive support to state and local government agencies that want to engage in performance contracting to upgrade their buildings. Since the mid-1990s, the Colorado GESPC program has assisted over 200 projects that have produced nearly $35 million in annual utility cost savings as well as an additional $3 million in operations and maintenance savings.[5] Facilities upgraded through the state's program have saved almost 200 million kWh and more than 500 million gallons of water to date.[6]

Colorado's GESPC program is an instance of the state legislature recognizing the value of GESPC in helping to meet state clean energy or energy reduction goals when programs are structured well. Providing funding to state-led GESPC programs through legislative appropriations can be a strong signal to state agencies, local governments, and the broader MUSH sector that GESPC in their state is a proven and useful method for making improvements to their buildings.

Funding Mechanism

Initially CEO's program was managed in-house and technical support was provided by a number of contractors, utilizing State Energy Program (SEP) funding to operate. The Program has gradually moved its technical staff in-house as the program's funding sources have evolved over time. Today, the program is funded in part through legislatively appropriated funds as part of Colorado's Long Bill. Approximately 80% of the GESPC program's support utilizes appropriated funds, while the other 20% comes from SEP.[7]

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4 Analysis of federal ESPC projects indicates that annual M&V represents an average of 2% of the project costs, but that projects conducting annual M&V achieve savings equal to 107% of what is guaranteed in the contract. For more information, see: U.S. DOE, 2019. "The Business Case for Conducting Measurement and Verification In State and Local Government Energy Savings Performance Contract Projects." https://www.energy.gov/eere/slsc/downloads/business-case-conducting-measurement-and-verification-state-and-local-government

5 Colorado Energy Office, "Energy Performance Contracting," accessed October 11, 2019, https://www.colorado.gov/pacific/energyoffice/energy-performance-contracting.

6 *Ibid.*

7 Conversation with Colorado Energy Office budgetary staff, October 8th, 2019.

Technical Assistance Services Offered

CEO uses funding from the state legislature to provide a range of services aimed at assisting facility managers with navigating the state's GESPC program using a five-phase technical assistance approach consisting of program education, ESCO selection, IGA, project implementation, and M&V support.

CEO staff provide robust support to GESPC program participants, especially to ensure the IGA is conducted properly and M&V reports confirm savings guarantees are met. Funding from the legislature provides CEO staff with the program stability to provide the technical assistance necessary to guide facility owners through the performance contracting process and to give those owners the confidence that they need to continue to engage in performance contracting in the future.

Colorado's GESPC program is currently comprised of three technical staff. These staff provide comprehensive support for state and local facility managers who wish to make improvements to their buildings using GESPC. CEO staff work on the front end to recruit new facility managers into the program. They perform site visits, conduct outreach and marketing, and establish partnerships with external agencies. More recent focus on these activities has resulted in increased interest in GESPC from facility owners, particularly those in more rural areas that can be harder to reach than government or MUSH buildings near major metropolitan areas and come with their own unique challenges.

CEO's GESPC Program begins with a "GESPC 101" presentation for interested facility managers, followed by the first phase, or Introduction Phase, that seeks to educate program participants and establish a Memorandum of Understanding (MOU) between CEO and the participant to set expectations and outline program requirements. Once a facility owner decides to use the program and an MOU is executed, CEO staff can provide tools and guidance in order to assist with the ESCO selection, IGA, contracting, and M&V processes.

In the second step of CEO's process, the Secondary ESCO Selection, CEO works with program participants to leverage CEO's Request for Proposal templates and tools to ensure the participant's existing procurement process meets the requirements of Colorado's GESPC process. CEO is not involved with the scoring or decision making within the ESCO selection phase, preferring to let the facility owner manage that process consistent with existing procurement practices. The CEO GESPC Program emphasizes the importance of ESCO interviews for its clients and attends the majority of these interviews to ensure the program's pre-qualified ESCOs are presenting Colorado's GESPC model accurately and that any clarifying questions from the client or ESCO can be addressed.

CEO staff spend the most time on the third phase in the program, the IGA, as this stage has proven to be the most critical for GESPC project success. CEO, in partnership with Colorado's Office of the State Architect and Attorney's General Office, have developed template contracts that ESCOs are required to use so CEO staff can better assist the client with making informed decisions around potential facility upgrades. CEO staff actively participate in meetings at critical milestones related to the development of the

IGA and review and comment on the final IGA report and draft GESPC contract. CEO staff are heavily involved with the IGA process because the data collected during the IGA effort and presented in the IGA report establish a plan for and set the terms of M&V.

If the facility owner decides not to self-fund their project internally, Colorado's GESPC statutes enable a process through which GESPC Program clients may solicit third-party financing. The CEO staff offer a template for the Request for Proposal and have a list of capital lenders who are active in the Colorado market but do not engage further due to federal and state regulations. Thus, it is up to the facility owner using the information provided by the ESCO and tools provided by CEO to select a financier. Once the GESPC contract and financing arrangements are executed the project enters into what CEO terms the Implementation Phase, CEO staff have little involvement during project implementation. They begin to re-engage with the facility owner once the Post-Installation Report is finalized and construction wraps up at the facility.

The acceptance of the Post-Installation Report results in the start of the fifth and final phase of the CEO GESPC program, the M&V Phase. Per Colorado state statute, CEO's program requires a minimum of three years of mandatory M&V of energy savings on GESPC projects. CEO staff track and review annual M&V reports to ensure savings guarantees are being met and M&V content provides useful and relevant information to program clients. If the client wants to pay for M&V beyond the mandated three years, CEO staff review those reports as well. CEO has found that M&V discrepancies are recognized and addressed throughout the first year in order to compile documented results in the second year, and then have those results confirmed by the third year of M&V. CEO staff works throughout this process to help ESCOs and program participants come to an understanding of the results and to ensure that there is sufficient confidence that savings will persist for the remainder of the contract term.

Virginia: Funding Strong GESPC M&V Practices Using State Energy Program Dollars

The Virginia Department of Mines, Minerals, and Energy's (DMME) GESPC program has successfully retrofitted 246 public buildings in the state (with over $860 million of investment) since 2001, including 56 higher education buildings, 48 state agency buildings, and 142 other public buildings.[8] These improvements are expected to result in $40 million in annual avoided energy and water costs and over $1 billion in long-term infrastructure and energy costs for Virginia facilities over the projects' lifetimes.[9] Virginia's program is funded through the use of SEP dollars that pay for the two program staff who manage and oversee the GESPC contracts.

Virginia's program shows how states can leverage SEP funding to support public facility managers' use of performance contracting to make improvements to their facilities. The flexibility of SEP funds offered by DOE can help produce strong GESPC programs to drive retrofits in public buildings and encourage greater adoption of efficiency measures by state and local governments as part of lead-by-example programs.

8 Conversation with Nicholas Polier, Virginia Department of Mines, Minerals, and Energy, April 10th, 2019.
9 Virginia Department of Mines, Minerals, and Energy, "Energy Savings Performance Contracts (ESPCs)," accessed October 9th 2019, https://www.energy.va.gov/savings/espcs.asp

Funding Mechanism

Each year, U.S. DOE allocates money to state energy offices (SEOs) using a formula based on state attributes. The SEOs then use this money to work on a wide range of projects and initiatives, including GESPC. Due to the flexibility of SEP funding, states like Virginia have the opportunity to fund the staff who oversee all aspects of state-run GESPC programs.

Technical Assistance Services Provided

SEP funding enables the two staff members to provide technical expertise and support for public facility managers throughout the GESPC process—staff are especially involved in project execution, attending all project status meetings and ensuring all disputes are rectified.

DMME staff first meet with potential clients to talk through the GESPC process and assist them with initial audits that the facility managers use to select an ESCO from a list of prequalified vendors that the state of Virginia has already approved. Staff facilitate the ESCO selection process between the facility managers and the ESCOs according to the established program and code. They also provide a template for the development of the MOU between the selected ESCO and the client towards performing the IGA before beginning retrofits, and remain on standby as a technical resource during those negotiations. Once the IGA results are presented to the facility manager, DMME staff review the IGA to ensure that the measures are technically sound and that proposed project meets with all requirements of the state's GESPC program as well as the Code of Virginia.

Once construction has started, DMME staff continue to monitor the project through its completion. DMME staff participate in all status meetings for the project to ensure that the project is proceeding accordingly. If the ESCO or the customer has issues with the project, DMME staff sit in on those meetings as well. DMME staff also provide contract templates, Request for Proposal documents, terms & conditions worksheets, a MOU for the IGA fee, and a pre-proposal conference invitation.[10] Once a project is nearing completion, DMME staff host a wrap-up meeting, meet with the customer, and ensure that all issues have been resolved. If not, DMME has the customer hold off on signing a contract until all underlying issues are dealt with appropriately. Finally, DMME also reviews the M&V reports as a third party to ensure that all projects are adhering to the Code of Virginia and project performance guarantees are met throughout the contract.

DMME has always required that staff review all proposed GESPC projects for state agencies before being agreed to by facility managers and ESCOs to ensure that projects are technically sound and conform with Code of Virginia requirements.[11] However, as a result of its past experiences, in 2017 Virginia made changes to its requirements for GESPC contracts. DMME required that ESCOs utilize eProjectBuilder software for all projects. eProjectBuilder is a data management system that Lawrence Berkeley

10 Lawrence Berkeley National Laboratory. 2019. Information collected for forthcoming report on state-level ESPC program support.
11 Virginia Department of Mines, Minerals, and Energy, "Instructions for State Agencies," accessed October 9th, 2019, https://www.dmme.virginia.gov/DE/PerformanceContractingSupport.shtml.

National Laboratory developed and maintains on behalf of U.S. DOE that allows agencies and ESCOs to track and report information for different energy projects in a streamlined, standardized fashion.[12] Additionally, Virginia now requires M&V of energy savings for the entire contract period, with no cancellation clauses in place. To assist with M&V, DMME provides an M&V plan review, an annual M&V report review, a master contract, and template documents (e.g., contracts, IGA plans, Request for Proposals), and DMME reviews the M&V plan for completeness and adherence to program standards.[13] DMME also requires the use of International Performance Measurement and Verification Protocols (IPMVP) in order to ensure that energy savings agreed to in the contract are being achieved by the ESCO.[14] This comprehensive approach to M&V ensures that all contracts are meeting the agreed-upon savings or that ESCOs will be installing additional efficiency measures or reimbursing the agencies if shortfalls occur.

Washington: Self-Funded GESPC Program Delivers Over Three Decades of Success

The Washington State Department of Enterprise Services (DES) has successfully operated a GESPC program for over 30 years and completed over $1.3 billion in public facility efficiency projects, saving customers over $40 million in verified annual energy costs.[15] Fees from each project pay for DES staff to guide public facility managers through the entire GESPC process, resulting in a sustainable and trusted program that continues to promote energy retrofits across the state. DES expects to continue to provide high-quality support for public facility managers in Washington who are keen on making facility improvements.

Washington State's GESPC program is an established model for other states to emulate, with its self-service fee acting as a sustainable source of revenue that allows a dedicated staff to continue to operate the program at a high level over time. This model can support larger staff sizes that allow for greater oversight and monitoring of projects from start to finish.

Funding Mechanism

DES funds its technical assistance efforts through a self-funding mechanism that was established when the legislature enabled GESPC for the state.[16] The mechanism allows DES to recover its costs for the technical assistance provided through project fees based on the total cost of each project. The larger the project, the lower the overall fee percentage. DES established the fee structure based on the number of hours spent by a project manager on a typical project (around $51,600/project). The fees cover all costs, including staff salaries and benefits, training, travel, and agency overheads. The fee schedule that DES implements is based on a sliding scale that ranges from 1%

12 https://eprojectbuilder.lbl.gov/home/#/login
13 Lawrence Berkeley National Laboratory. 2019. Information collected for forthcoming report on state-level ESPC program support.
14 For more information on IPMVP, see https://evo-world.org/en/products-services-mainmenu-en/protocols/ipmvp
15 Washington State Department of Enterprise Services, "Energy Savings Performance Contracting Program Process Description," https://des.wa.gov/sites/default/files/public/documents/Facilities/EPC/ESPCProgramProcessDescription.pdf?=6b9a0
16 Chapter 39.35C.020(5), Revised Code of Washington.

of project cost for the largest projects to 10% for smaller projects. It is based on an agreement with the agency's fiscal group that was determined by the amount of effort it takes for DES staff to manage a project from start to finish. A chart of the current fee structure is found below:

Table 1: Washington State Guaranteed Energy Savings Performance Contract Fee Structure

Total Project Value	Project Management Fee
$5,000,001 to $6,000,000	$68,800
$4,000,001 to $5,000,000	$67,700
$3,000,001 to $4,000,000	$66,700
$2,000,001 to $3,000,000	$62,500
$1,500,001 to $2,000,000	$58,300
$1,000,001 to $1,500,000	**$51,600**
$900,001 to $1,000,000	$43,800
$800,001 to $900,000	$41,300
$700,001 to $800,000	$38,300
$600,001 to $700,000	$36,500
$500,001 to $600,000	$33,800
$400,001 to $500,000	$30,200
$300,001 to $400,000	$25,800
$200,001 to $300,000	$20,700
$100,001 to $200,000	$14,400
$50,001 to $100,000	$7,800
$20,001 to $50,000	$4,200

Source: Washington Department of Enterprise Services

Technical Assistance Services Provided

As a result of its ability to self-fund its program, DES' staff of eleven engineers are able to combine a number of effective strategies to help state agencies, local governments, and MUSH market actors utilize GESPC contracts to complete energy retrofits for their facilities. The program's project managers provide technical assistance to their clients for each step of the GESPC process, with an emphasis on supporting rigorous M&V by reviewing M&V schedules and reports.

DES works with each agency interested in pursuing GESPC upgrades by signing an interagency agreement. It helps the agency identify the ESCO they want to work with and assists the ESCO in performing a preliminary audit for the project in question to ensure that the project is going to be cost-effective from an energy savings standpoint. DES uses its staff to continue assistance for the client throughout the rest of the project, including contract execution, construction oversight, invoice review, and project closeout procedures.

DES also uses its funding to provide comprehensive M&V throughout the project cycle. DES requires M&V for the entire length of the contract. The M&V process starts when DES, the ESCO, and the agency pursuing GESPC improvements craft the initial proposal. DES then reaches an agreement with the ESCO on the type of measures used and the schedule for M&V review. Once the project is installed and generating energy savings, DES requires the ESCO to issue a notice of commencement of energy savings. This marks the beginning of the first year of M&V tracking. The ESCO then performs the M&V analysis and sends it to DES prior to sending it to the client so DES can review and comment on the report. The ESCO must also produce a documentation of operations and maintenance performed in the building during the contract term. These procedures for M&V help assure DES that its clients are receiving the savings agreed to in the guarantee and set up the program for long-term success, helping to build trust among facility managers who have made or are interested in making improvements to their facilities.

Conclusion

Colorado, Virginia, and Washington are achieving a combined $115 million in annual energy and water cost savings through their respective GESPC programs. Their programs highlight three distinct ways that a state's sustained technical assistance funding can support positive outcomes and deeper retrofits with GESPC, leading to further advancement of state lead-by-example goals. Technical assistance, including M&V, to support facility managers and other key actors throughout the GESPC process is key to a successful GESPC program. However, sustained funding is also an important component of program design to ensure SEOs or other state agencies have dedicated staff to provide continuous guidance and support for facility managers throughout the GESPC process. Without sustainable technical assistance and support from SEOs, facility managers may be reluctant to enter into GESPCs, making it more difficult for states to meet their state lead-by-example energy goals. The variety of funding methods available to sustainably fund technical assistance provides flexible options for states to craft a funding structure that works best for them given their GESPC regulatory structure. The case studies included here highlight replicable models of potential GESPC technical assistance funding mechanisms, emphasizing that regardless of the mechanism used to provide it, sustainable funding is a best practice for states working to meet lead-by-example-energy goals through GESPC programs.