

Sean Williamson: Hello, and welcome to the third installment of the Better Buildings Summer Webinar series. In this series, we are profiling the best practices of the Better Buildings Challenge and Alliance partners and other organizations working to improve energy efficiency in buildings. We hope you will join us twice a week through the remainder of the summer. Stay tuned for more information on our 2020-2021 webinar series launching in fall.

I'm your moderator, Sean Williamson. I serve in the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy as an advisor for partnerships and technical assistance. My work focuses on state and local governments and the deployment of solutions to finance energy efficiency. Thank you, all, for being with us today. We have a wonderful session prepared and some fantastic speakers I'll introduce in just a moment.

We're excited to announce that today we will be using an interactive platform called Slido for questions and answers. Please go to www.Slido.com using your mobile device or by opening a new window in your Internet browser. Today's event code is #DOE. If you would like to ask our panelists any questions, please submit them any time throughout the presentation. We will be answering your questions near the end of the session. You can select the thumbs up icon for questions that you like, which will result in the most popular questions moving to the top of the queue.

The goal of this webinar is to highlight the opportunities and successful models that exist for maximizing energy savings in the public sector to the dynamic duo of financing and technical assistance. The webinar is intended to cover a lot of ground, including strategies for addressing hard to serve small and medium sized public facilities under 50,000 square feet as well as proven strategies for large public sector facilities. Additionally, we'll cover conventional finance products such as loans and leases, as well as specialized financing products that use energy cost savings to repay the upfront costs of energy upgrades.

This webinar will include something for everyone, but specific strategies may not be suitable or available for every building or jurisdiction. The underlying theme is that we can serve more public sector buildings and maximize energy savings through the combination of financing products and technical assistance. First, I'll outline the opportunities for the dynamic duo of financing and technical assistance, and then I'll take a deep dive into the specific

potential that resides in small and medium public facilities and share a couple case studies.

Next, our first speaker, Anastasia Beckett, will introduce us to efficiency services agreements as a tool for the public sector and share some insights on the case study and the role of how technical systems can support adoption. Then, our second speaker, Dale Hahs, will discuss energy savings performance contracts, or ESPCs, and highlight states that have built successful technical assistance programs to achieve sustained energy savings.

Finally, we'll have time at the end for discussion and questions.

Let's get started. Next slide, please.

The energy and cost savings opportunity in the public sector is significant. State and local government buildings consume more than 1.4 quadrillion BTUs annually. Just a 20 percent reduction in energy use amounts to an estimated \$6,000,000,000.00 in cost savings, which the public sector can put towards other priorities. The upfront costs of completing efficiency upgrades has long presented a barrier to investment in energy efficiency within the public sector.

Covering the costs of upgrades requires either using internal funds and competing with other public priorities or borrowing funds, which comes with constraints such as debt limits. Access to financing is especially important right now as state and local revenues and internal budgets are in serious jeopardy as a result of COVID-19 related economic impacts. Borrowing can allow the public sector to capture energy cost savings, improve the performance and help critical facilities, and do it all without competing for funds intended for essential public health and safety functions. Financing products such as energy savings performance contracting, revolving loan funds, and other innovative financial products have mitigated a number of financing barriers listed in Table 1 below, and lowered the cost of borrowing, improved terms, and reduced public sector risk.

This has resulted in more than \$7,000,000,000.00 invested in efficiency improvements in public sector buildings over the past three decades. The goal of this webinar is to persuade you that financing products can be far more impactful and reach a broader market when coupled with technical assistance. Financing products are part of the solution because they address persistent barriers such as upfront costs.

However, financing is unable to address a critical set of non-financing barriers. In fact, use of financing frequently results in these non-financing barriers being amplified. Non-financing barriers include distrust of the vendor, energy service company, or financial provider, lack of awareness of highly complex financing arrangement works and how it allocates risk, and limited staff capacity and skill sets to navigate the process.

A frequent anecdote from the public sector is, contractors have all the information and we have very little. The public sector is concerned that they're being sold a bill of goods. So, when dealing with complex and new financial arrangements, information asymmetry and distrust can be especially prevalent.

So, how can access to technical assistance help to overcome these non-financing barriers, and what exactly does technical assistance entail? Technical assistance includes pre-qualified vendors or energy service companies, legal and financial template documentation, access to a neutral third party expert that can attend meetings and answer questions, and much more. Technical assistance can help overcome trust barriers, fast track the question and answer process, add legitimacy to an unfamiliar financing product, and reduce the effort necessary by public sector legal and financial staff to structure the deal.

What I'd like to do now is share some information about the market segment that has perhaps the most to gain from the dynamic duo—small and medium public sector facilities. Next slide, please.

Small and medium sized public facilities under 50,000 square feet account for 84 percent of all state and local government owned buildings. As the table on this slide shows, the median size of common public sector facilities such as police stations, libraries, and courthouses falls well below this 50,000 square foot threshold. These facilities also tend to be 30 years old or more, attributing to building equipment at the end of its useful life. In fact, 40 percent of buildings in the public sector are older than 50 years old. Also, across the U.S., the deferred maintenance backlog for all K through 12 schools, regardless of size, is estimated to be in excess of \$250,000,000,000.00. Small to medium sized public facilities have benefited from energy efficiency investments, as we'll highlight with a few case studies shortly.

However, in the absence of technical assistance to help public sector building operators and decision makers, unique challenges these small facilities face can make it particularly difficult to complete building upgrades. Unique challenges facing small facilities include designing projects that are economically viable—for example, project development costs are about the same for small projects as they are for large projects. Identifying experienced staff to lead projects. Managing an energy upgrade, especially when using a complex financing option, requires specialized knowledge and staff ability. And adequately managing risk.

Financial institutions may perceive unique risks with small government entities, making it more difficult to find competitive financing. For example, a shrinking tax base, particularly in a rural community, can limit a community's ability to make future payments. As a result of these challenges, small to medium public facilities have not benefited from energy efficiency financing such as energy savings and performance contracting to the same degree that large facilities have benefited. For example, data from Lawrence Berkeley National Laboratory and the National Association of Energy Service Companies estimates the medium project size is over 250,000 square feet for state and local buildings, and the average ESPC project cost for state and local facilities is \$6,000,000.00. Across all commercial buildings under 50,000 square feet in size, the National Institute of Building Sciences estimates the investment potential for energy retrofits exceeds \$35,000,000,000.00.

So, technical assistance can help small and medium sized public facilities navigate their unique challenges and take advantage of available financing mechanisms. For example, a third party technical assistance provider can help identify facilities with the most energy savings potential through a low, no cost back of the envelope audit which can help decision makers prioritize buildings that merit further commitment of resources. Likewise, technical resources such as pre-approved vendors and template documentation can ensure smaller public facilities, devote fewer resources to procurement and legal review, saving on transaction costs.

Not all of the financing products or programs discussed today are suitable for small or medium facilities. Nonetheless, there is significant opportunity in this market segment, and I'd be remiss if we didn't put a spotlight on it.

What I want to do next is share two simple models from two different states for marrying conventional financing, loans, and leases with technical assistance to achieve energy savings for smaller projects. Next slide, please.

First, I want to highlight Nebraska's Dollar and Energy Savings Loan Program. This is a program operated by the Nebraska Department of Environment and Energy and 100 plus private lending institutions through the state of Nebraska. The program was established in 1990 and has closed over 28,000 loans. Most of those loans have supported residential energy efficiency retrofits, but the program is available to the public sector. The program uses public funds at 0 percent interest and co-invests in loans for private lenders, effectively resulting in below market rate loans. Loans are available for a variety of sectors, but special terms and conditions are available for schools, local governments, and nonprofits. These loans are generally suitable for small projects, because the max is \$500,000.00 per loan, and loans can be used for soft costs.

The customers of this loan program have benefited from technical assistance, including a variety of do it yourself calculators and analysis guidance. These tools are used to help customers determine feasibility and eligibility before filling out forms or contacting vendors. There's also access to technical assistance advisors with Nebraska's energy office, especially for schools. This is critical to navigate the financing process and build confidence. This program has closed over 1,000 loans directly supporting the public sector and over 28,000 loans total. The program has also been available to help schools and local governments in emergency situations such as a boiler failing. The program is also a great example of a public/private partnership that has been very inclusive of financial institutions throughout the state, which ensures communities throughout Nebraska can work with the financial institution of their choice. Next slide, please.

The second case study I want to feature comes from the Commonwealth of Virginia. The Virginia Energy Leasing Program is operated by the Virginia Treasury and interfaces with performance contracting technical assistance, offered by Virginia's Departments of Mines, Minerals, and Energy, or DMME. The leasing program is available to state agencies and other quasi-public entities. Under the program, the Virginia Treasury procures a line of credit from a financing institution, creates a master lease agreement and allows individual state agencies and institutions to finance eligible efficiency measures over 12 or 15 year terms. The leasing program takes advantage of the Treasury's ability to

consolidate lease purchasing which results in lower interest rates. The leasing program may be used in conjunction with an energy savings performance contract, or it can be used without a performance contract.

Virginia's DMME runs a performance contracting technical assistance program, which has supported more than \$923,000,000.00 in ESPCs since 2001. This program is available to all Virginia local governments and state agencies and features technical assistance via in person consultations and technical reviews. DMME is able to work with public sector entities to screen prospective projects via a no cost, back of the envelope energy audit. Projects that are suitable for ESPC continue along in the program. Other projects that may not be suitable for ESPC based on their economic viability may still benefit from the leasing program. Program staff are available to moderate a pre-bid ESPC meeting on behalf of the public entity, which is a nice touch that builds confidence in the process. Our second speaker, Dale Hahs, will discuss ESPC's technical assistance in more depth.

In terms of program impacts, many of the 260 ESPC projects that the technical assistance program has supported since 2001 have leveraged Virginia's leasing program. In speaking with the Virginia DMME staff, they expressed how valuable the technical assistance has been in diffusing distrust that may exist between a public entity and a private vendor. Next slide, please.

So, before I turn it over to our first speaker, I want to highlight a few DoE resources. First, there are two forthcoming resources specifically targeting opportunities in small and medium public facilities, including, first, achieving energy savings in small to medium public facilities, a strategic approach to prioritizing projects and using financing. This resource is designed to help public sector leaders make strategic planning decisions and assemble the actionable information necessary to use financing with confidence. Additionally, the ESPC guide for small projects provides the how to and case studies for using energy savings performance contracting on small projects.

I also want to mention the Better Buildings Financing Navigator. This is a one stop shop to learn about and compare financing approaches for energy efficiency and renewable energy as well as to get in touch with Better Buildings financial allies. Next slide.

Please stay connected with DoE and public sector financing resources by visiting our state and local solutions center,

subscribing to our monthly state and local newsletter, or reading our 2020 Energy Efficiency and Renewable Energy Resources for State and Local Leaders trifold. You can also contact me directly with the information provided here.

Let's introduce our speakers. We have a great lineup of presenters today. Our first panelist is Anastasia Beckett with Metrus Energy. As Senior Vice President of Business Development, Anastasia leads Metrus' Business Development team and manages channel and partner relationships for the company nationally. Prior to joining Metrus, Anastasia led the commercial and industrial and MUSH market energy sales team for Tesla in the Western U.S. Additionally, she served as a public finance banker and financial advisor at Raymond James Finance and KNN Public Finance, where she held Series 52 and 63 FINRA licenses. She received a Bachelor's of Science from San Francisco University.

Our second panelist is Dale Hahs, with the Energy Services Coalition. Dale is the Executive Director of the Energy Services Coalition, a national nonprofit organization composed of a network of experts through a wide range of organizations working together at the state and local level to increase energy efficiency through Energy Savings Performance Contracting, or ESPC.

ESPC is nationally regarded for having created the authoritative best practices assemblage of tools, guides, and programmatic resources to maximize the benefits of Energy Savings Performance Contracting and host the only national competition of ESPC success per capita among the states and territories. ESC is a technical assistance provider for the U.S. Department of Energy and is responsible for scores of webinars, seminars, and workshops, as well as individualized state and local government programmatic project design assistance.

The Energy Services Coalition chapters deliver unbiased outreach and education while managing the challenges of local markets. Prior to the Executive Director role for the coalition, Dale served multiple terms as the President of the Board of Directors and has been engaged in the energy industry providing client solutions for over 20 years.

As a reminder, please send in questions through Slido by going to Slido.com and typing in event code #DOE, and we'll try to get to as many of them as we can. The session will also be archived and posted to the Better Buildings Solution Center for your reference.

At this point, I will pass things off to Anastasia. Anastasia, are you ready?

Anastasia Beckett: I am. Thanks, John.

Great. So, thanks for the introduction. I guess we can kind of skip me and go to the next slide or next two slides, here. So, as John mentioned, I'm with Metrus Energy and I wanted to give you a little bit of an overview of what we do. So, we are a developer, financier, and owner of large scale energy and water efficiency projects, and our customers include colleges, hospitals, Fortune 500 companies, and of course, public sector.

And what we do is, we partner with leading ESCOs and contractors to implement our projects and we provide up front development and financing for projects. And the way that we do this is through efficiency as a service, which I think a lot of people are starting to hear about, but it's a little bit undefined and so, hopefully, I'll be able to provide some clarity on that issue. And we have an efficiency services agreement that we use to provide that service. We have operational energy and water efficiency projects in 26 different states and counting, and simply put, we help our customers monetize assets, upgrade equipment, and reach their sustainability goals. Next slide.

And so, just kind of a high level evolution of efficiency as a service, here. What we've done is kind of taken the best of both worlds. We've looked at traditional efficiency performance contracting, which has served the public sector for a number of years and has been successful, taking some attributes from that, coupling it with a power purchase agreement which you typically see for renewable power generation where a customer agrees to have a company come and build the infrastructure on their facilities and then they agree to pay for the energy that is generated from those systems.

And then also taking a look at just kinda as a service in general. So, if you think of, you know, something like, I guess we'll take Airbnb as an example, that's something where, you know, you can rent an Airbnb, go on vacation, but you're not purchasing a vacation home. You're able to use it to be able to benefit from it, but you're not having to buy it and you're not having to provide all of the ongoing maintenance for the home. So, it's a way that you can benefit from something without actually having to make the initial investment. And so, we've kind of taken all of the best attributes from these three different types of products and

combined them into one and that's what you see with efficiency as a service. Next slide, please.

So, I just wanted to take a look at some of the key customer benefits, and there's a lot on this slide, I don't know that I'll touch on every single thing, but if you have any questions, certainly put them in Slido and I'll try to address them.

So, if you take a look at the key financial benefits to the customer—so, our efficiency services agreement is a services agreement. It is not that you do not have to pay for anything up front, so you get to preserve your debt capacity, and that's something that, of course, right now is particularly important, because we're seeing declining revenues, budget cuts. So, this is something that is very important to the customers that we're working with and I imagine is important to you as well. You're also able to see immediate cash flow savings from the energy and water savings.

And this is something that I think is really interesting, because I think typically, when you're looking at doing a project, you're sort of scoping it out, you know that maybe you need, you have aging infrastructure, you need new HVAC equipment, for instance, or new lighting, and you're going to your management and asking them, "Hey, I need this stuff. I need some money for it." So, you're either asking for budget dollars, or you're saying, "Hey, can we enter into an equipment lease or some other tax exempt financing to pay for it?"

And in this situation, what you're able to do is sort of flip that and go to your management and say, "Look, we can get all of this new equipment and I'll be able to provide you budgetary savings, and we'll be able to hit any sort of greenhouse gas emission reduction targets that we have." And so, you're able to provide benefit to the stakeholders at the facilities that you're managing. So, I think that that's a really good way to look at it.

And then also, you're only paying for real life savings. And so, what I mean by that is that we actually have a third party go out and do measurement and verification on an annual basis that measures that the equipment is functioning the way that it was intended to at the onset of the project. And if it is not, and the savings are not realized there, then what happens is, your payment to us is just adjusted downward. And so, it eliminates a lot of the risk, because again, there's no underlying debt, there's no hell or high water payment that you're making and waiting to get, you

know, reimbursed through savings. So, it's a really interesting way to look at it with this kinda services agreement concept.

Another thing is that, you know, we only get a portion of the savings paid to us if the project works. And so, we have a very vested interest in making sure that the project does, in fact, work, and also making sure that the pricing is good from the contractors that are implementing the project. And because we have projects, you know, all over the country, we have a lot of pricing comps and they're able to determine whether we think that the pricing is fair or not. So, that's a benefit that is passed on to you for your project.

And then, I guess, you know, a lot of the operational benefits are fairly obvious. This is a turnkey approach, so you know, we kind of provide everything to you on an ongoing basis for the entire term of the contract. And I think, you know, one thing I wanted to touch on is the ongoing maintenance and monitoring, the maintenance and operations in particular. And we can structure this so that either the ESCO partner provides this work or maybe it's something that you wanna do, maybe you don't wanna have a third party coming in and maintaining your equipment. Well, in this situation, we have flexibility to be able to accommodate that. Next slide, please.

So, the way that the projects work is that there's two contracts. One is the one I've been talking about, which is the efficiency services agreement—that's between Metrus and our customer and it's where we agree to pay for 100 percent of the project. We do take title to the equipment and pay for all of the ongoing maintenance and monitoring. And then the customer is agreeing to pay us a portion of the realized savings over the term of the contract. And then in the second contract, which is the ESPC contract, that's a contract that we have with the ESCO who's implementing the project. And it's really similar to a performance contract, actually, it's just with us instead of with the customer directly. Next slide.

So, a typical project profile for us, we do integrate energy and water efficiency together. We don't have to, but that's something that we like to look at as well. And then we also can include some solar energy infrastructure, battery storage, or EV charging. We incorporate that into our larger energy efficiency projects. So, you get to kinda take a holistic view of things through this approach. And the typical project size is between 1 and 30,000,000. Those are just estimates; we don't have a hard limitation on that, but just to give you a sense of the type of projects we do, that's about the

range that we work with them. And we're able to bundle projects together across different facilities. So, say you're a county and you've got a courthouse and a jail and maybe a public works yard—we can bundle all those together and do one financing for it and then we can bill you separately by department if that's something that is required by you. And then the terms of the contract usually are between 7 and 15 years for public sector; because of the superior credit profile, we are able to go out 20 years. Next slide.

So, we really like to take a holistic approach. You know, we work with you to develop a project that's bespoke, you know? Not all facilities are the same. You'll have, you know, different ages of your infrastructure, different priorities of your management or of the people using the facility, you know, whether that's teachers or students in the school district setting. So, we go in and, I think something to note here, too, is we don't manufacture anything, we don't make any software, we don't—you know, we're very agnostic in terms of what is implemented. And in fact, we've implemented over 30 different types of measures at this point and are open to looking at others. We'd just like them to be top tier, like I said, where we have a vested interest in making sure the projects work, so we want to make sure it's good equipment. So, next slide.

So, on this slide, I just wanted to touch on, you know, what are some things to consider when you're planning a project in kinda the infancy? So, I guess the main questions that are outlined here, I'll touch on a few of them. It's just kind of, you know, do you have that capacity or do you want to use that capacity in order to pay for a project or use a tax exempt lease or something like that, or do you want to use a services agreement? Those are different solutions and you'll have different vendors for each of those solutions.

And so, you just want to have it clear in your mind what you want to do so you're talking to the right people. And then same thing with, you know, off balance sheet financing. You know, we've worked hard with Gadsby to make sure that ours is the off balance sheet financing treatment. That's not necessarily important to everybody. So, you know, you wanna know if that's important to you. If it is, you'd wanna get your auditor looking at the contract early on to make sure that they agree that they think it's an off balance sheet treatment, or your financial advisor.

And then, just taking a look at a couple other things, you know, is the utility escalation rate appropriate for this type of a project? That's something that you wanna keep in mind to have a sense for how utility rates have escalated in your service territory over the last several years so you can, you know, pin that down where it makes sense. And then also, you know, is your financing party charging a fee or not? Is it kinda similar to a mortgage where you might get an interest rate but then they're maybe charging you a point or something like that on the back end? You wanna know all that so you know how much you're paying.

And then performance guarantee, you know, those are very important if the ESCO can afford to pay it. So, you want to make sure that that's something that they're equipped to do. And then, you know, is the pricing transparent? With any method of financing, you want to make sure that you're able to see, you know, not only what the financing costs are, but what the construction material costs and just kinda all aspects of the project, so you have a good sense of that.

One thing I really wanted to touch on for the operational side of things is, if you're looking at starting projects, you want to make sure that you're not necessarily picking off all the low hanging fruit like LED lighting, where that has a shorter, simple payback and is more likely to get budget approval. Because those types of projects help pay for things like HVAC, chillers, boilers that are more expensive equipment to install. And so, when you bundle them together, that's where you're getting this holistic approach and you're able to use the savings from the lighting to help pay for these other, more expensive types of equipment.

And I guess lastly here, in terms of the RFP, I'm assuming you would have to go to RFP for these services, and so you'd wanna think, you know, "Do I go to RFP for construction? Is it for ESCO services? Is it for a financier? Is it for both, one or the other?" and have kind of a clear idea of what you want to do so that you're asking the questions that are appropriate for the type of project you're doing. There's a lot of guidance on, you know, from state and local government on performance contracting procurement, but there's not a lot on finance. And even the ones that do contemplate finance usually just kinda say, you know, "ESCOs can provide financing." But you'd wanna, if you're doing a finance project, you'd wanna make sure you're working with a reputable company, so you'd wanna have some more questions that you would be asking of the finance partners in order to vet and be able to compare them appropriately. And so, that's something that I

think the DoE is actually working on some guidance for that that should be coming out in the next few months, so if you need help with that, I think that's a good resource.

And then, moving on to the next slide, I think we can kinda skip that. This is my contact information, but I'm sure you'll be able to get that from the organizers as well.

And then the next slide, just real quick, is a case study. This is a hospital project that we worked on, and this is just to give you a general sense of what we do. So, you can see there that the scope included, you know, several different types of assets that we installed and different equipment that we installed and the project size is about, you know, \$4.2 million. I'd say that's average for us. Like I said, we do do projects that are less than that and more than that, and it resulted in savings of over a half a million dollars a year.

So, with that, I'm gonna turn it back to Sean to introduce Dale.

Sean Williamson: Thanks Anastasia. So, quick reminder for our audience to send in any questions you may have through Slido by doing to Slido.com, and typing in event code #DOE. We're collecting notes for a Q&A period at the end of the session. Alright, let's transition to Dale. Dale, are you ready?

Dale Hahs: I am. Thanks, Sean. And thanks to our host, the United States Department of Energy, specifically those who work so hard to bring the annual Better Buildings Summit and these presentations.

So, we're a little behind time—let's jump right in. In our brief time together, we want to focus on paid for by savings project mechanisms and the technical assistance to support them.

So, I join you today, as mentioned, sharing my perspectives and on behalf of the Energy Services Coalition. If you're not familiar with ESC, we've been around for a little over 20 years now, the sole purpose of which, these individuals joined together to promote and share information regarding what has helped make guaranteed energy savings performance contracting programs and projects successful. We host a compendium of resources, none that we've written. I always like to comment that what ESC does is collect what's working from around the nation from states, projects, and programs and shares them with others on our website. Next slide, please.

It always seems to me that the character of Maria in *The Sound of Music* was ever so insightful when she offered starting at the beginning, a very good place to start. *[Laughter]*

So, let's think about what's in a name or perhaps even more critical in today's world, what's in initials, or what's in acronyms? You know, if I say, "Hey, there, I'm D.H.," you might imagine that I'm Don Henley singing for the Eagles—not likely. Debbie Harry, Doc Holliday, or even Dustin Hoffman—but no, I'm just a guy who's been working in the guaranteed energy savings performance contracting space for a few decades now.

In the same way, I offer for you caution, thinking when someone offers you something about public/private partnerships through acronyms or initials or paid for by savings projects, make sure you start out with a full and complete definition of what you're talking about, who it's for, and how it may or may not fit your application and circumstance. Next slide.

To that end, I've assembled for you just a few points to think about, particularly for those of you in the public sector—you know, those entrusted stewards of our public funds and resources. I see these checkpoints as a bit of a litmus test that you may wish to consider to help you in your quest for how these concepts, this alphabet soup of acronyms, are applicable to you. Particularly as a public steward, I strongly encourage you that you start with the enabling statute for the concept. GESPC is a methodology, a procurement method, a means of financing and repayment of financing will be described for you in the applicable legislation whether federal or state. Knowing up front that the product offering you're thinking about is supported by your policy makers and empowered by a specific piece of legislation can go a long way in saving you a bunch of time and effort and frustration.

Each of these little checkpoints are offered to help you think through or even pose to others in your institution, your agency, or your state just some of the boundaries that public sector folks should be considering. Next slide.

I happen to be a long standing proponent of guaranteed energy savings performance contracting. And so, here are just a few definitions for you, the first of which is from the United States Department of Energy. I'm often asked, "Where did you find that?" Well, it was common in 1996. It just so happens I've hung onto it all along. And then a few from the Internet, if you will.

And the last one, I pinned personally. And the reason to pin a definition was to cover all the pieces and parts that are generally thought of as being important. So, debt-free modernization of facilities and system infrastructure by a single source provider built to or in excess of site specific quality standards, following processes and industry best prices, reasonable price, a profit, proof of performance, and a guarantee of savings.

To be sure, while a challenge arises from time to time in some states, GESPC is embraced by similar but unique enabling legislation in every state, and of course, the federal government. So, if you're a public sector project participant, you should always start there. Definition and guidance for you can often be found in the enabling statute.

In addition to enabling legislation is perhaps the earliest and certainly the most successful in enduring public/private partnership, several states host programs for their state agencies, some even extend the program to their units of local government. GESPC resources like RFP templates, standardized contracts, and pre-qualified providers, just to mention a few. Next slide, please.

As a quick primer on how the money moves in non-federal public sector projects, the owner, agency, or institution has a committed operations and maintenance budget that, for most, includes a line item for utilities, as here depicted by the upper right pie chart. This budget line item is the source for project finance repayment. In GESPC projects, a separate financing instrument or contract typically is procured by the public sector, with the funds held in escrow until an invoice documents the receipt of products and services justifying the release of payment to the project provider, generally an energy services company or otherwise known as an ESCO. It's those products and services, including operating strategies, that produced the savings, reducing the utility operation and maintenance cost needed. These avoided costs produced by the improvements in efficiency, often referred to as savings, allow both the bills to be paid, the upfront financing including interest costs to be repaid, and leaving any excess savings for the agency or institution. I know that sounds simple, right? Next page.

And where does this money come from, again? Well, in non-federal GESPC projects, it could be from any one of these sources, and maybe others. So, here again, a bit of a checklist on considerations for you regarding the procurement of funds. You need to make sure, from your state, your agency, your institution how you manage each of those checkpoint items. For non-federal

public sector GESPC projects, tax exempt municipal leases are still the number one source for upfront financing—frankly, due to flexibility in the low net interest cost. Just so you that know, in some states—Vermont, Maryland, North Carolina—they've designed programs and project financing considerations in such a way that these guaranteed savings supported projects are excluded from debt ceiling calculations. Next slide.

So, this slide captures a bit of an interesting concept here on all the different roles. So, just to recap, there are many, many similar but different products available in the marketplace to serve different folks in different applications. One thing is nearly a constant. There remains a considerable knowledge imbalance between the providers and the project participants or owners. You know, not very many of us learned how to ride a bicycle on our own, and rarely would any of us buy a house without a knowledgeable licensed real estate agent to help protect our interests. I for one am not always sure that folks should be entering into a paid for by savings project without some form of technical assistance, guidance, or support. So, what's a person to do? Next slide.

So, to navigate the considerations and decisions that these projects require, you'll almost always need to assemble a team. All the folks depicted here fill incredibly important roles. So, even though you may be the energy folk, or the folks that run the facilities or try to keep them running without the appropriate funds to do so, in either case, you recognize you don't have the money that you need to accomplish your goals and you're looking for a way forward. No question you'll need to know if what you're thinking about doing is legal, and unless your state has provided you with a well vetted, standardized contract, you'll absolutely want legal counsel to review any contract that would be offered for your consideration.

Then there's the money folks. If your budgetary authority doesn't understand how the money moves in these projects and isn't willing to maintain your operating budget for the full term of these agreements, you're gonna find yourself in quite a bit of a mess. And don't forget the procurement people—for most public entities, competitive procurement is the rule. The maintenance people? Well, they know what needs to be fixed. The construction people? Wow, if you don't build or retrofit your facilities to or in excess of the quality standards of your construction team, you have really missed the boat.

Now, you can decide on your own when you need to get the approval of your supervisory authorities, but I would stress the

importance of early. And that leaves us with oversight. Technical assistants, owners' representatives, help—where do I get it? When do I get it? How do I pay for it? How do I know that the help that I'm getting is qualified help? Next slide.

Some states have stood up remarkably successful programs, and it turns out that they have these very distinct characteristics in common to support guaranteed energy savings performance contracts. Summarizing these attributes would lead us to leadership, standardization, promotion, and technical assistance. And Washington state is a great example. The Department of Enterprise Services hosts 13 trained and experienced engineers who support these projects from cradle to grave through the full term of the agreement, paid for by a sliding scale small fee to the project. Their programmatic design, combined with the support team, has led to the completion of nearly 1.5 billion—with a B—dollars of improvements funded by efficiency.

In other states, this comes from the Energy office, while still in others, the owners are recommended to go procure technical assistance from a small stable of private sector providers. We continue to recognize the need for the leveling of this playing field as it relates to expertise and experience and encourage you to stay on the lookout—heads up—for a new national resource center and project oversight training series sponsored by the Federal Energy Management Program and the Office of Weatherization and Intergovernmental Programs. Next slide.

Just a couple of other quick resources to point you to—recently supported by DOE's Weatherization Intergovernmental Programs Office, ESC created an online community. This public sector information exchange provides a platform to ask questions and share insights among peers. So, you know, when you have a Microsoft question, you ask the community. In the same way when you have GESPC questions, think about the community—it's there for you. Next slide.

And finally, as we continue to see this need for ongoing education and support, we've created a series of podcasts about GESPC, walking through the concepts and steps to assemble a project. These little 10 to 15 minute recorded snippets offer great insights and considerations that we know you'll find valuable.

Over the last 30 years or so, it seems inevitable that GESPC is becoming a public sector, business as usual transaction for facility and system modernization, economic development—yep, the

creation of real jobs—and environmental stewardship through energy efficiency. We know that continued education can help. Standardization in well vetted contracts and procedures have proved to be rewarding—but in the end, nothing replaces the value of experience and expertise to come alongside you to help ensure that every GESPC project, to ensure that your GESPC project is a great one. Next slide.

So, remember, you're already gonna spend this money. The question is, is whether it's gonna be used to fulfill an operating expense or as an infrastructure investment.

So, thanks for running a little behind time—back to you, Sea.

Sean Williamson:

Thank you, Dale, for that high energy presentation—fantastic. Alright, now, we'll transition to our discussion and Q&A session. Let's start with an audience poll question. The prompt will be up momentarily. This is an open-ended poll, so please type in your response.

The question is—what do you need to be able to use financing to complete efficiency upgrades on your jurisdiction's facilities? If you're not from the public sector, maybe you're a consultant, maybe you interact with public sector stakeholders as part of your job—what do they need to make more use of the financing resources that are available, to make them more confident and comfortable to use financing?

I'll repeat the question—what do you need to be able to use financing to complete efficiency upgrades on your jurisdiction's facilities?

So, with this long form response, we won't be sharing the poll results today, but your input is valuable and will help to inform us about how we can better serve the public sector going forward. Let's give it about 10 more seconds and end the poll and I'll just flag for folks. At this time, we're going to begin taking questions, so if you've already populated the poll response and you want to transition over to Slido and begin typing in questions or upvote any questions that you already see posed, we will transition to those momentarily.

Alright. At this time, let's transition to Slido. And as that's brought up to the screen, so we can all see some various questions that were asked, I'll jump in with one I prepared for Anastasia that I'm curious about. So, Anastasia, I've seen examples of Energy

Services Agreements in the MUSH sector, including hospitals, public charter schools, and higher education, but I've not seen any examples of energy services agreements being used on public facilities such as state-owned office buildings, wastewater facilities, correctional facilities, or traditional K through 12 public schools. Are there specific barriers to applying ESAs across all segments of the public sector?

Anastasia Beckett: Thanks for asking that, Sean. No, I do not think there are specific barriers. I think one of the reasons that you see that is that, even amongst the vendor community that there's a little bit of a tendency to go towards, you know, the path of least resistance. And so, for school districts, you know, we know that they can issue general obligation bonds, for instance, or, you know, cities and counties, they have access to tax exempt leases, you know?

And so, that, those are the projects that people are looking for, where the customer can pay cash from those proceeds. I don't think that there's any barrier other than a misconception that there is an endless amount of tax exempt financing available to those types of customers, which is, of course, not really the case when you consider debt capacity, either statutory limitations or, you know, more local government policies.

So, it's just something that has traditionally been used more in the commercial and industrial space, but there's no reason why it cannot be used outside of that, more for the kind of mainstream public sector.

Sean Williamson: Got it. Thank you. So, I'm gonna go ahead and relay the top voted question, here, and Dale, I think this might be more in your wheelhouse, but if you don't feel like you've got the knowledge to field it, we can take a pass.

The question is—where can we find out more about financial and technical expertise for small and medium public entities looking to marry renewable energy with their ESPCs, particularly in areas of the country without power purchase agreements?

Dale Hahs: Thanks, Sean, and you know, I applaud the question. Frankly, I think the answer in many cases comes from both parts of this equation that we've been discussing today.

On the one case, the energy services companies are an ever moving, ever learning source about how to help you and how to engage, and certainly, they have every reason to be. On the other

hand, the folks that provide technical assistance might have the right questions for you to pose to ensure that the contracts that you're entering into have met with the appropriate authorities. In many cases, the early agreements were a lot like fundamental guaranteed energy savings performance contracts with a separate piece that looked like a power purchase agreement.

So, when you see the combined instruments in today's world, you do see the language of both being incorporated into single documents. I don't know of a fundamental resource that focuses solely on that, but if you all are capturing, you know, who's posing the questions, we can do a little research and perhaps circle back.

Sean Williamson: Yes. Great suggestion, Dale. Alright, for our next question, this is directed to Anastasia—do your projects include, or can efficiency as a service include, savings from taking advantage of time of use rates, demand charge reductions, demand response program incentives, and potentially providing grid services?

Anastasia Beckett: Yes. That's a pretty short answer, but yes, we do incorporate all of those into our projects.

Sean Williamson: Great. Thanks for the snappy answer. We'll keep moving along here, because we've got a lot of questions coming in.

So, I'm gonna go ahead and ask the next one, which has ESPC and efficiency as a service components, and it recognizes that the grid will be reinvented in the coming years. How will owners entering into these different agreements, where payback assumption and the cost models are based on pass rate increases to be protected in a future of unknown costs and evolution of rate structures?

That's a great question. Anastasia, do you want to take an initial crack at that?

Anastasia Beckett: Sure. So, in the efficiency as a service, the owner is actually a company like Metrus, where we actually own the equipment. And so, we can—and depending on that customer's comfort level, I mean, we can structure a project that has no utility rate escalation assumption at all and keep it at zero. So, that's a really good way to take a look at, you know, if you really are uncomfortable and feel like you don't know what the future risk is gonna be, that's what we would suggest doing.

Dale Hahs: I'll just jump right in, Sean. You know, Anastasia makes a great point. You know, there's always the variability of how you use rate

escalations. I don't know about you folks, but my crystal ball is not perfect. If it were, I would probably be managing some stock market portfolio.

So, we see smart, educated users engaging in utility escalations—we strongly urge them to seek all sources of information about past increases and what prospective increases might be. And if you're reticent on going 20 years, 15 years with a flat rate increase, recognize that these projects afford you the ability to say—let's use 2 percent for year for the first five years, and then zero thereafter. That form of flexibility is not often discussed, but as end users, as good thinkers about these projects, you should know that those abilities are always there.

Restructuring the grid probably won't be in the next few years, but yes, we do think that we should all be conservative about how we look at rate escalations, how they impact risk and obligations.

Sean Williamson: Thank you, both. And let's take one more question, and also on the topic of future proofing. This is a question I've heard a lot in terms of local governments and cities that are reluctant to commit future city council debt or financial commitments, which can shorten the life of loans or project costs to only a couple years, typically, because the current city council may be reluctant to doing something beyond our current term.

Do you all have any suggestions on how to navigate that particular problem from the public sector and how they thoughtfully structure a contract to think about the future and future public elected leaders?

Dale Hahs: This is Dale. I would like—

Anastasia Beckett: Yeah—

Dale Hahs: - Anastasia? Please.

Anastasia Beckett: Oh, no—you go ahead.

Dale Hahs: One real sort of anecdotal, humorous example—one of the states in these United States actually had that prohibition several years ago, and it was within their Constitution. They went about the fact of changing it by public vote, because they recognized the importance of these commitments.

In the contracts that are typically available as models, best practice models for guaranteed energy savings performance contracts, there has always been a non-appropriation clause suggested, which was in fact to resolve this concern about public entities passing along obligations from one to another. Over the course of time, as the industry evolved, more and more folks are trying to find shortcuts, ways around the general fundamentals of these projects, and it's created a bit more concern for future city councils.

But I always pose this—with full education, would a future city council be prepared to commit that they're going to pay the utility bill in the facility? And if so, then they just need to look at the particular protections that they're comfortable with so that they feel honored in the good work that they're doing.

Sean Williamson: Anastasia, I'll give you the last word.

Anastasia Beckett: Yeah. Well, I agree with what Dale said. If you're looking at it, you know, I mean, you're really, you're kind of swapping your utility bill for this type of an arrangement, it's a services agreement, so those are, you know, typically paid for as a matter of course and city councils usually don't just opt to not pay for things like that.

And so—yeah, it's a matter of education and, you know, we've certainly been able to overcome these types of issues previously.

Sean Williamson: Thank you, both. That wraps up our Q&A section. I want to thank everyone for being engaged, asking your questions, and I apologize if we were unable to get to them.

So, as a reminder, the slides and recording from today will be archived on the Better Buildings Solution Center. Please revisit the slide deck to access the resources we discussed today.

Also, as previously mentioned, this is the beginning of the 2020 Summer Webinar Series. In this series, we are taking on the most pressing topics facing energy professionals, with new experts leading the conversation each month. All previously recorded webinars are in the On Demand Webinars library.

We hope you will join us on Thursday for the next webinar in the summer series titled “Next Generation Building Performance Policies: Maximizing Energy Savings and Environmental Impacts.” This webinar will discuss how cities are deploying the next generation of building performance policies to maximize energy savings and buildings and meet their energy and

environmental goals, hear from leading cities regarding their strategies for policy design, implementation challenges and successes, and early policy impacts.

In addition to our On Demand Webinars library, the Better Buildings Program recently launched its e-learning center, a collection of webinars, courses, and other e-learning resources covering a range of areas relevant to Better Buildings, Better Plants Partners. Check out this helpful collection of resources on the Solution Center.

And with that, I'd like to close and thank our panelists, Anastasia and Dale, very much for taking the time to be with us today, for sharing your top notch expertise. Please feel free to contact our presenters directly with additional questions or if we couldn't get to your question during the Q&A period. I encourage you to follow the Better Buildings Initiative on Twitter for all the latest news. You will receive an e-mail notice when the archive of this session is available on the Better Buildings Solutions Center.

Thank you, everyone, and have a nice afternoon.

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