Adam Guzzo: Well, hello, and good morning. Welcome to part three of our three-part webinar series on energy data management. Over the course of this webinar series, we've introduced you to the Department of Energy's Energy Data Management Guide, a web-based resource that provides public sector organizations with a seven-step approach to establish a robust and sustainable energy data management program.

The webinar has been organized around the guide's three pillars, and part three, today's webinar is focused on Hardwiring Energy Data Management into Your Organization. So we can go ahead and go to the next slide, which is our title slide. Yep. So that's what we're focused on today, part three. That's our final part in the series. Can you go to the next slide?

My name is Adam Guzzo. I'll be your moderator today. I've been with the Department of Energy since 2010, advising state and local governments on strategies to maximize energy and cost savings through energy efficiency and renewable energy technology programs and policies.

And then more specifically, I lead projects on interest data management, and state and local energy planning, and was one of the primary authors of the Energy Data Management Guide. A little later in the webinar, I'll introduce you to our two other speakers from North Carolina's Department of Environmental Quality and the District of Columbia's Department of Energy and Environment.

Next slide, please. So before we dive into the agenda for today's webinar, let me explain how we're going to be handling polling and Q&A. You should see a link now in the chat that will take you to Slido. If you've joined us for a webinar or perhaps one of our Better Buildings summits in the past, you'll be familiar with Slido.

But it's an interactive platform, where you can enter your questions and provide us with some feedback via polls. And we're going to do both of those things today during the webinar. So please go to slido.com and use your mobile device or you can open a new window in your internet browser, and then you'll enter the hashtag code will be DOE.

That's what you'll enter into the top and it'll take you into the part where we're going to do the polls and questions for today's webinar. And then if you'd like to ask any of our panelists questions, we're going to, again, do that through Slido. So submit

those anytime and then we'll return to those questions towards the end of the webinar.

And then the last thing I'll mention is Slido is really cool feature where you can actually up-vote other people's questions, and those will move to the top. And so we'll generally look at the most popular questions. So if you see other questions from other attendees that you like, go and up-vote those and we'll try to address those first.

Okay, what are we going to cover today? So let's go to the agenda on the next slide. I'll introduce you to the Energy Data Management Guide, I'll do a deep brief demo of its features and functionality. And then you'll hear from Reid Conway, who's going to share how North Carolina has worked to hardwire energy data management in North Carolina by establishing and optimizing its organizational structure to support data-driven energy management.

Then you'll hear from Andrew Held, who will talk about the strategies that District of Columbia employees to engage and communicate with key internal and external stakeholders to help establish and maintain buy-in for data driven energy management in the district. And then finally, we'll take your questions and close with sharing some additional resources on a topic that you can check out later.

All right, next slide. And this is actually going to take us into Slido. So we're going to start things off with a few polls so we can learn more about you and what you're hoping to get out of today's webinar. Hopefully, if you're in Slido at this point, you should see the option to select what sector best describes your organization. And I can see folks are already jumping in on that so thanks.

Looks like we've got a close neck and neck tie here with states and local governments. Got some school districts on the line as well. Great. Yeah, those are our target audiences for this guide. It's for public sector organizations from all three of those sectors. So glad we have folks from those area. Give you another five or 10 seconds here to get comfortable Slido, make sure people have a chance to get logged in.

And let us know where you're from. Alright, great. Lots of local governments. Let's go to the next poll. Now, I want to ask you a bit about your role in your organization. Give us a sense of more specifically the kind of folks and responsibilities that you have and

who we're talking to. So data analysts, energy engineer, energy manager, quite few identify as other program manager. Great.

Okay, so hopefully we have a number of folks on the line here that have some responsibility over interviewing assets, managing those assets, managing energy on behalf of your organization. That's really the focus and topic of the guide and the direct audience that we're looking to speak to on today's webinar. So thanks for your feedback on that. Great. A good mix of folks.

All right, let's move on to the next poll. And this will be kind of a free write, free response. What are you hoping to learn from today's webinar? And as much as we can, we'll certainly try to tailor the topics that we address, especially in the Q&A, to try to hit on some of these things. But we'd love to hear from folks on what you're expecting to get out of this, make sure those expectations line up.

Perhaps some of the topics you may be interested in we've covered in previous webinars in this series. So if you can share some of your insights, that will be great. And we should see those starting to pop up on the screen. And folks have some things to share, how to maximize the use of micro grids to improve energy efficiency. Great question.

Not sure that we'll get to the specifics of that today. But that's a great question. Yeah, I think we'll talk about what North Carolina and the District of Columbia do as far as their data management efforts. Or you'll certainly hear a lot of information about what we have collated in the guide as it relates to that. Yeah. Great, yeah. Setting yourselves up for success.

I think you'll hear proven practices from both Reid and Andrew. Hopefully, you can employ some of those in your organization. Yeah, how do we encourage other employees and other departments to participate in sustainability efforts? Great question. We'll talk about that, especially as it relates to step seven in the guy. So fantastic. Thanks for the feedback. Appreciate it.

I think we'll cover at least most of what you've outlined here. Alright, we can go back to the slides. And I'll introduce you to the Energy Data Management Guide. Thanks again for the input. So for those of you who joined us on previous webinars, you will have heard some of this. So apologize if that's repetitive for those of you who are new, but hopefully this will be helpful information.

So about a year ago, DOE released the Energy Data Management Guide. Again, it's a web-based how to guide that provides public sector organizations with a seven-step approach for establishing an energy data management program. And as many of you know, because we've got a number of states or governments and school districts on the line, often you're managing a large number of assets, your large energy users.

And so it's a significant part of your work. And so taking a data driven approach to managing those assets can help your organization identify opportunities for energy and cost savings, make informed decisions about which facilities to prioritize for improvements, and certainly enhance control of your energy budgets.

And the proven practices outlined in the Energy Data Management Guide, along with the case studies from other public sector organizations, resources and tools highlighted in each of these seven steps, which you see on the right side of your screen here, are designed to help states and local governments and school districts utilize utility and asset data to manage the buildings and facilities they own and operate more effectively.

So hopefully, that gets you excited. Again, you can see those seven steps. The first two are focused on generating buy-in for the program by defining the value proposition for data driven energy management, and then aligning that value proposition with your organization's goals. We covered that in the first part, webinar one in our series. So I encourage you to check that out.

We heard from city of Boston and Portland Public Schools on that topic. Then last month, in part two of our series, we focused on how to build a solid foundation for your energy data management program by walking through the three steps, steps three through five listed down on the screen.

And in that webinar, we had experienced energy management staff from Maryland and Knoxville share their proven practices and lessons learned. Again, a recording of that webinar is also available. And then today, in our third and final webinar in this series, we will examine step six and seven in the Energy Data Management Guide. I'll tell you a little bit about that on the next slide.

So as we look at step six and seven, they're again designed to help you effectively hardwire energy data management into your

organization. As you can see on the slide, step six explains how to optimize your existing organizational structure for data driven energy management by ideally centralizing energy data management and bill payment, and then enacting policies and leveraging federal or other programs that can help institutionalize the energy data management program in your organization.

And then in Step seven, we discuss how to develop stakeholder engagement strategies that create and maintain collaboration across various levels within your organization and then tailor communication strategies to those specific stakeholders. So that's just a quick overview of the two steps. I want to jump actually now into a live demonstration of the tool.

So hang on one second is I switch over to that. Okay, so what you should be seeing now hopefully, on your screen is – let's see if that's working. Marissa or Claire, can you just give me an indication that we're seeing the Energy Data Management Guide?

Marissa: Yep, that looks great, Adam.

Adam Guzzo: Thank you. Okay. The joys of these virtual presentations and trying to figure out technology. Alright, so just to give you guys a sense of what you're going to experience when you land here, here's the homepage of the Energy Data Management Guide. As I mentioned, we covered the previous steps, one through five in our parts one and two, and we're going to focus on step six and seven.

But I want to orient you a bit here to the website itself and to the content. So obviously, here's the homepage. You can jump right in by hitting this "Get Started" button. Or you can jump into any of the steps, they're all hyperlinked, or these kinds of pillars, as we call them to introduce you to the steps in that pillar. I'll show you that in a minute.

We also have an about page here. So you can find out more information about the purpose of the guide, its intended audience, and you can learn about the methodology that we use in developing it. So that's all outlined here. I'm not going to go through that in detail.

But just to make you aware, as part of our research in developing this, we engaged 80 individuals representing 10 states, 25 local governments, and five school districts, through interviews and other formal engagement. And you can see, I'll go back here, we actually have a list of all of those people and their organizations

where they were at the time we engage them, if you're interested to see a full list of that.

So do you want to find out more? There's information to do that. I'm going to take us now and over here to the glossary. We also have, again, a glossary of common terms that may not be common to everyone. And so we've defined a number of different terms that we use throughout the guide. You can navigate based on order to terms that may be less familiar to you. So that's available.

There's also embedded in some of these terms, links to specific initiatives, where that's for tools, where that makes sense. I'll take us back here to the homepage. And then I'm going to walk you through a bit of the content itself. So we're actually going to jump in and use this navigation here on the right side of the homepage and jump right into this hardware energy data management pillar.

And what you'll see here is a landing page that provides an overview of steps six and seven, and then highlights in the process timeline here at the top. You'll see kind of where we are in that timeline, and you can click along here and jump around. And I'll show you how that works here in just a minute.

But the idea is if you want to get a sense of what the content is in each of these steps, you can click on this drop down so you get a brief introduction to what's covered in that step. And then you'll see the embedded case studies, resources and tools within each step.

We're looking at step six right here. So for example, if you're a local government and want to check out a case study showing how a city transition from a decentralized to a centralized energy data management structure, you can click on this case study that features the city of Denver, Colorado.

You'll see a summary of that case study including the barrier solution and outcome, along with additional details on the implementation strategy that the city used when moving to a centralized structure for managing energy data. So just give you a flavor, that's what one of the many case studies looks like. Again, we also have resources relevant to that particular topic area that you can click on and go directly to those if that's of most interest to you.

Similar setup in step seven. Again, a number of case studies. We see one here featuring North Carolina, for example. And then we

have a number of resources and one tool in this case related to this content. So here's an example of a sample report to an agency director. You can see what that looks like.

You want to see how others have communicated information up their chain, or perhaps you want to take a look at the specific tool that we have featured here, it'll take you to Fort Lauderdale heat map tool, which is a visualization tool to help showcase where they're using hourly energy data, 15-minute interval data, some elements of progress in a particular building where they made some upgrades.

So that will just give you a sense, hopefully, of what you can find on this landing page. I'm going to actually jump into step six and just briefly showcase the content that you can find within that step. And I'll show you step seven next. So again, you can see process timeline, here we are step six. Get brief introduction to the content, including the five recommendations to consider for optimizing your organizational structure.

And then those are aligned with this left-hand navigation on the side. So let's say you're particularly interested in our recommendation, you consider centralizing your energy data management and bill payment, you can click on that item in the left hand navigation, it'll take you directly to that section and you can see what you're presented with. Here is some information on the value proposition.

For more centralized data management bill payment structure, some changes you may want to consider and then key responsibilities of energy and account payable staff in a more centralized structure. And then if I continue scrolling down, just to give you a sense of the remaining content, you get examples on the value benefits of centralized energy data management, some of the challenges associated with that.

And then you'll see some, excuse me, you'll see some examples, resources. Throughout, that you can utilize, including some federal programs that support energy data management. So that's how things are structured generally across the board. I'll jump up here to step seven, just to go to the process timeline. Now we're into step seven, same idea, presented within an overview.

And you'll see this step in particular is broken out into two major sections on engaging stakeholders and communicating progress and results. So once again, perhaps you're interested in

communicating progress results. And you'll see, we've presented you with strategies for communicating and displaying energy data, a bit of insight on what is benchmarking, the types of benchmarking, if you're not familiar with that term.

And then some examples of how cities have taken their energy data and communicated it either using these kinds of charts, perhaps using rankings and a table that shows lowest energy performance to highest energy performance, in this case, from San Francisco. Place to use charts, and graphs, using trend lines and static information. And then more interactive and visual methods of communicating data via maps, and other kinds of dashboards.

So you've see an example here from District of Columbia, particularly their energy benchmarking DC map, which is an interactive map, you can click into these dots and it'll give you more information on particular facilities, so on and so forth. So hopefully, that gives you a good flavor of the kind of content available in the Energy Data Management Guide, in particular to these two steps. The other five steps are set up similarly.

And so if you've got questions about that, happy to address those during the Q&A even those in the Slido. And we'll try to get those answered if we can. But certainly, I hope you'll explore it and utilize it. I think it's got great content that hopefully can help you establish data driven energy management in your organization. So let's go back to Slido now. We'll do one final poll before I introduce our other presenters for today.

Thank you, Claire. And so you should see now a poll that's asking for some of your insights on what are the barriers to making operational improvements and communicating results in your organization. And these lists of barriers are based on our intelligence gained from engaging a number of states, local governments and school districts over the years. Some of the things that they've expressed are challenging for them.

I love to hear from you on this webinar what some of those things are. You can pick more than one here. We know sometimes there's not just one barrier to these things. So limited capability to create compelling energy performance reports. We've certainly seen that quite a few times. There's now a number of tools that we offer and others offer to help with that.

Lack of buy from key stakeholders to act on data. Yep, that's important. We cover that a lot in steps one and two of the guides,

but also been taking data and communicating it effectively with recovering step seven. Andrew is going to talk a bit about is there another effective way to help generate or maintain that kind of buy-in?

So thanks for the feedback here. Yeah, sharing data broadly across your organization, that's really important too. Who are those key stakeholders? What are the kinds of information that they need in order to act and be incented to act and take energy saving actions? So it's an important one as well and can be a challenge. That's also reflected in step seven of the guide.

Great, well, thank you guys for the feedback. Really appreciate that. And go back to the slides now. And I'll introduce our first speaker today. So Reid Conway from North Carolina's Department of Environmental Quality, excuse me. He'll be our first one. And then we'll hear from Andrew Held from the District of Columbia's Department of Energy and Environment. So I'll briefly introduce Reid and then turn it over to him.

So Reid serves as the senior energy specialist for the State Energy Office in North Carolina. And in this role, he serves as a technical expert on energy related topics, with a primary focus on energy efficiency strategies within local and state governmental sectors, providing on-site energy assessments, strategic energy planning, oversight of performance contracting and consultation services. And Reid is a licensed — contractor and one of the first professional energy managers in the country. So Reid, thank you for joining us. The floor is yours.

Reid Conway: Oh, thank you so much, Adam. And I want to talk a little bit today about the Utility Savings Initiative Program that North Carolina started back in 2002 to help the state to reduce energy spending. And oh, by the way, welcome to state government, I will be using an acronym for USI, the Utility Savings Initiative as we move forward. So what exactly here is USI?

USI is a lead by example program designed to help manage utility consumption costs within the public sector. And when I say within the public sector, it starts with state owned buildings, community colleges, county cities, and most importantly, our K-12 schools here in North Carolina. So how does USI work to do this?

Well, we try and be on site as much as possible, working in the field to educate and identify projects, providing technical assistance and often, we can help as many folks as we can. In a

non-COVID environment, our team of three folks here within USI are doing roughly over 500 site visits a year across the state. And the Utility Saves Initiative also oversees performance contracting for all local and state governmental units.

So I don't know about you, but for me, I have a hard time saving energy sitting behind a desk. And so I like to be out working with folks to try and identify what we can do. So USI is also the collector of annual consumption data for all state agencies, the UNC system, which is 17 universities and for affiliates, and all 58 Community Colleges. Last year, these three groups reported consumption on over 171 million square feet in North Carolina.

And I mean, that is all sorts of buildings across the state. And those three groups spent $343 million. So if we do a little quick math, these three reporting entities spend almost a million dollars a day. So take a minute, let that sink in, a million dollars a day. It's why I have a job. And so this data collection was helped along because of legislation, general statutes or what I like to call the god tubes.

So in 2007, Senate Bill 668 required the reporting of annual consumption to USI by these three groups. It established 02/03 baseline for the state-owned buildings and a 2007 and 2008 baseline for the community colleges. It also created some reduction goals to be hit by the state-owned buildings of 20% by 2010, and 30% by 2015, in overall BTUs per square foot.

And most importantly, it required USI to provide an annual program report update to the state legislature on how everybody's doing. And so everything was going along pretty good until 2015 when we met the goal. So after 2015/2016/2017, we really have no goal, but USI kept working and collecting data, and making sure that we were continuing to see energy savings across the state.

So lucky for us, the UNC system, in 2012, created the Appalachian State Energy Summit. And so the UNC system spends over $200 million a year of that 343 million, so they're the big spenders for North Carolina. But at the same time, they wanted to do better. So they created this Appalachian Energy Summit to bring together everybody, chancellors of universities, CFOs, faculty, staff, students, facility maintenance, energy managers.

All of these folks get together in order to try and break down barriers and silos that exist on campus to focus on energy efficiency and to move energy efficiency forward within the UNC system. This Appalachian Energy Summit has been going on for

nine years now. And the event has grown quite a bit to include many of the private colleges and universities in North Carolina as well as some from other states within the southeast, as well as some of the North Carolina Community Colleges.

And since USI is the collector of all data, not to mention that we work hand in hand with these folks on a weekly basis to drive energy efficiency, USI plays a big role in the event every year by bringing the actual data to the audience at the beginning of the summit to help provide a guide to where and what needs to be accomplished, and to continue to move energy efficiency forward within the state.

So I'd be remiss if I didn't mention another big action in North Carolina that happened recently. In 2018, Governor Cooper released executive order 80, which was a new goal for all state-owned buildings to hit a 40% reduction by 2025. It also required the cabinet agencies to appoint energy managers. And you might say to me right now, what's up with that? And you would be right.

Our program has been going for almost 20 years, and just now the cabinet agencies are appointing energy managers. Yes, so even the best programs need to be pushed in some areas at different times. The UNC system, however, has had energy managers for many years, and they've been leading this. They've been leading the fight for energy efficiency in North Carolina because of it.

While the agencies have been reporting, there's never been really true energy managers for any of the state agencies outside the department of public safety. Public safety is our number two largest user in North Carolina and they've had energy managers for a long time to manage that $50 million a year budget.

But what bothers us is we had five other agencies that combined spent $50 million a year as well. So one agency with energy managers. So USI has been pushing the need for energy managers since the program started back in 2002. The value that a full-time energy manager brings to a program is undeniable and to help with the education of these energy managers.

Since the executive order was put into place, USI has been doing monthly meetings to increase the knowledge of the energy managers and of energy efficiency. We use our technical staff in turn and we also use outside vendors to try and bring continual information to these folks to get them more well-rounded.

But most importantly, we provide time every month to allow them to talk, to interact, to share ideas and exchange with each other information that they think they're working on between the different agencies. So I think that about wraps me up, Adam. And again, thanks for letting me talk about what North Carolina has done.

Adam Guzzo: Thanks, Reid. Very insightful. As you can tell, North Carolina has been and continues to do a lot on this front. So we are excited that Reid was able to join us today and share some of his insights. And I appreciate the honesty about things that have worked and challenges that you guys still face despite the long-term efforts in this area.

A question to you, Reid, about that. You guys have been collecting data for almost 20 years now. What issues are you still observing noting that this is a sort of a never done process? You're always improving and identifying opportunities to streamline, right?

Reid Conway: Yeah, so the big thing, Adam, is the problem with collecting data for 20 years is people retire. People move on to other jobs, other things. And so it's a continuous process for us when we collect utility data for over 100 different locations to continue to work with the new folks that are coming in to have to report data. So trying to figure out who that is, what their role is, what knowledge do they have, how do we work with them?

It continues to be a new relationship building opportunity to manage energy efficiency within those sites as we move forward. The other issue is, like anybody else, utility suppliers as far as electricity and natural gas don't change too much. There's a finite group of those. But in most states like North Carolina, we have over 1,000 different companies that provide water utilities.

And so collecting data for all of these places across the state with that many different water providers, it's often difficult when you're a state like North Carolina that collects water data every year to try and get accurate water data. Because each one of these little utilities has a tendency to bill differently. With electricity, everybody's building in kilowatts.

While in water, that could be cubic feet, could be hundreds of cubic feet, could be hundreds of gallons, could be units. We even have some that bill in units. And so unless you know what is made up and behind these water numbers, it's difficult to get accurate numbers. And so we continue to have to work with our agencies

and with our reporting entities to try and make sure that we get the most accurate data possible.

Yeah, that's really important, it sounds like. I think it's a key thing you're hitting on there, one, the need to create champions and other departments and how to do that. And it will pick up that for it a bit more in the audience Q&A, because I know that's something that Andrew will talk about. But also, this idea of collecting data across all utilities.

And certainly, there's energy, water nexus in terms of use. And so it's important to understand what that connection looks like. Last question, before we shift over to Andrew, this is probably not an easy one because there's a lot, but maybe if you could say, what do you think has been maybe the most impactful action that has helped institutionalize energy data management in North Carolina?

The big thing is having the legislation and the goals that folks have to go and meet. I cannot mention the work that we do on site with these folks to keep energy management on the front burner, so to speak, to go way out and walk facilities and to continue to be on campus to educate and speak and do all of the other little outreach that needs to be done to keep energy management at the front burner, I think is huge, Adam, with what makes our program in North Carolina unique.

Adam Guzzo: Yeah, I love that about what you guys do. And it's one of the reasons why it's featured on our Better Building Solutions Center, because, like you said, a lot of these people that are in these roles, maybe less so now with this kind of creation of formal energy managers across these departments. But in the past, these people had other responsibilities.

Maybe energy management wasn't top of mind, but the numbers are pretty compelling. You mentioned that 340 plus million dollars a year is a reason why it makes sense to manage this and try to figure out ways to reduce in order to save taxpayer dollars. So thanks for your time, Reid. We'll bring you back for the audience Q&A here shortly, but I'm going to turn it over to Andrew Held from the District Department of Energy and Environment and would briefly introduce him.

So thanks, Andrew, for joining us and joining us on screen. Andrew is an Energy Program Specialist for the District Department of Energy and Environment as I mentioned. He works on development and implementation of the nation's first Building

Energy Performance Standard Program, which they call BEPS in the district.

And additionally, Andrew manages the district's BEAM database, which he can tell you what that stands for. But it's powered by DOE's SEED Platform, the Standard Energy Efficiency Data Platform, I think I got that right, which serves as the primary repository, this is the BEAM database, for building energy benchmarking and performance data in the district. So, Andrew, with that the floor is yours. Thanks for joining us.

Andrew Held: Awesome. Thank you, Adam. Yeah, apologies to everyone. As other local governments, I'm going to use a lot of acronyms during this. I'll try to spell them out the first time. And if there's any questions, I'm happy to clarify later. So I'm going to talk about our data practice. I think I'm going to mainly try to focus on the communication side and the stakeholder engagement.

But I think things I'm going to cover here are going to touch everything that has probably been covered in the previous energy management guidebook. So this is also just going to be a snippet of a process that I'm going to try to cover in seven minutes quickly. But happy to dive in deeper where Adam wants me to.

So I'm going to talk about our combination of our energy benchmarking program and the SEED Platform, which is the Standard Energy Efficiency Database, which is a free open source database offered by the Department of Energy. Next slide, please. So quick history of benchmarking in DC. 2008, the Clean and Affordable Energy Act was passed. This is the first benchmarking law in the country.

We were not the first to implement it, though. It took us till 2013 to get our regulations finalized, and we started collecting benchmarking data. And we've been collecting data since ever since. So we have data from 2020, all the way back to 2010. In 2014, US DOE starts the SEED project, which is designed to help cities with benchmarking programs manage this massive amount of data that they're starting to see and manage it and help utilize it towards useful projects.

In 2018, we then switched from a very clunky, very horrible Microsoft Access database to using SEED as a primary compliance database. And I'll cover in the next slide about all the things we did to make it optimize. And then in the same year, the Clean Energy Omnibus Act is passed and that becomes a thing.

And we realize we have to focus a lot more on both our data management practices gets a lot more data, as well as beef up our ability to actually communicate to building owners and stakeholders the importance of data quality, the importance of looking at trends in the data.

And we had to come up with a lot of really fun and helpful tools and processes to help do that. But it has taken us a little bit to get set up and we have a lot to show for it now. So the last thing on here is just in 2021 we actually establish the standards or regulations that's just finalized. So we have a fully implementable program and steps is a thing in DC. Okay, next slide.

To really again, just cover benchmarking, I'm sure everyone on this call has some familiarity with this. But our benchmarking program applies to all private buildings 50,000 square feet and above, as well as public buildings 10,000 square feet and above. Actually, all of this is going to end to 10,000 square feet in the next couple of years. But for now, we're still just 50,000 plus.

It's a requirement to report their energy and water utility data annually to the district through Portfolio Manager. And then we pull in this data to our system, perform data quality checks and compliance indices and disclose this data to the public. Next slide, please. So this is an outline of our process.

I'm going to try to cover all this but I'm going to try to focus mainly on the important endpoints that have to deal with communication because I think they're what really helps make our program successful. So Portfolio Manager to SEED is a pretty straightforward process building owners report to us annually.

We've set up automatic reporting so that building owners no longer have to worry about pressing a button every year to actually submit their data. You will be surprise how often building owners just forget to report. So that's all automatic. And then we're always providing feedback to building owners on data quality. So we're automatically sending emails every time we receive a new report.

That check basically, whether the —, whether they're missing data, and we always keep the building owners in the loop and ask them to correct any equality issues so that both the data on their end and the data our end are aligned and are accurate, and are useful to both of us. Then, I'm going to skip the top one I'm going to just go counterclockwise.

We are actively disclosing this data weekly based on what we have. So we're pulling data daily and disclosing it weekly based on what is actually compliant and checked. We're doing these two ways. There's a bulk spreadsheet for those data geeks out there that want to mess around with all 18,000 records.

And then we also have an interactive map, which Adam alluded to earlier, which is a lot more user friendly, now has a high-level dashboard on Adele communicate energy trends over time, as well as our compliance stats. And it also lets building owners go in, look up their property, look at an actual — scorecard for it and help them understand their buildings performance in a given year, and also their performance over time.

And they're seeing how they're trending in terms of other risk requirements. And the other big thing we've been doing is we're actively sharing our data with our district partners. So we in the district run our utility incentive programs in-house through an entity called the DC sustainable energy utility. We also have a green bank, as well as a building innovation hub.

And we're pushing our data out actively to all them so that when they go out and run their programs, so say the SAU is going out and talking to building owners about lighting retrofits or boiler replacements, they know off hand which buildings are performing well based on those benchmarking report.

Which ones have been trending down, which ones have been trending up, what their actual monthly data is? So it's helping our partners have a foot off when we're going out into these communities engaging with the stakeholder community. Next slide. I see also have —.

And I think just as a broad thing, I'm a huge fan of US DOE's free open-source tools. I think everyone should be. These are great if you're sitting on a budget and don't have a lot of staff capacity. They're all free. They're all open source. They're all pretty well, easy to read. If you have a good IT department, we also push out any of our code that we use to automate our processes.

So we highly encourage other cities to go in, take what we've learned, hopefully it gets you a step up. Look at what we've done with our data, look at how we've communicated it. We don't think we're the best, but we think we're a pretty good example to get people started. That's it.

Adam Guzzo:	Thanks, Andrew. And I appreciate the endorsement of some of our tools and resources. That was not planned that way audience, but we appreciate that. And glad they've been helpful. Obviously, that's the purpose of them, is to help our key stakeholders who are trying to manage their pretty significant number of assets and data coming in and make that as easy as possible where we can for as many people as we can.
	So Andrew mentioned SEED a couple of times, just for awareness there's a link on a slide. Later in the webinar, we can get to a number of our tools, including SEED. But although it was primarily designed to support benchmarking and building performance data, it also can be used to support internal data management of assets. So it can sort of serve as your central energy database if you don't have one.
	And I would strongly encourage those who don't to look at SEED as a first starting point for that. It's easy to use and much more efficient than a spreadsheet, for example. And not to mention, it can communicate with other important tools like Portfolio Manager. So Andrew, just a couple of questions and then we'll get into the audience Q&A.
	So if you haven't yet gone into Slido if you've got questions, I encourage you to do that now. We'll turn to those in about five minutes here. Just quickly, Andrew, you talked a bit about engaging external stakeholders using that data. I know you have a partner agency DGS, the Department of General Services, but how do you guys use the data that you're collecting to engage key internal stakeholders?
	So people in executive leadership, facility managers, folks who operate the buildings on the behalf of a district, so they see the value of data driven industry management.
Andrew Held:	Yeah, totally. So we're regularly coordinating with our internal stakeholders to increase access to data communicating trends we're seeing. So DGS obviously manages all the district's facilities and submits all the benchmarking data. But we're working hand in hand with them to help identify data quality issues, and help them do any planning that they're required to or want to do.
	And help that align with long-term district goals. So for example, the Department of General Services has a requirement to create a strategic energy management plan. And we've been working with

them using the benchmarking data really as the footing to talk about how they can use same to comply with their requirements under the building energy performance standards.

So the idea of us having matching datasets that are both accurate that we communicate about regularly on and both we are pushing information out to them and they're pushing information to us helps us be on the same page with them. And helps us basically move the entire district towards meeting our long-term sustainability goals.

Adam Guzzo: That's fantastic. Let's just to pull a string on that a little bit more. One of the barriers that we saw earlier from the audience is just sharing data and making it accessible to the stakeholders that need it. Can you maybe talk a little bit more about practically, how you guys do that internally?

You talked a little bit about how to do that externally, but maybe expand upon that a little bit more in terms of the value of that benchmarking in DC map, some of the other tools that you guys use to communicate with building owners outside of the district government.

Andrew Held: Yeah. I think we feel like we spent a lot of effort making our external processes for communicating data so strong. I think we've made it so well that it's also useful for our internal partners also. So we share data through Portfolio Manager and SEED. And we regularly communicate with them through the use of our benchmarking disclosure, as well as energy benchmark DC.

Because those processes are one of the same, we don't have to manage two different communication channels as much. Obviously, DGS is the largest property owner for buildings about 50,000 square feet district. Most buildings are 300, or something. So they have a lot more buildings we need to communicate about.

But because we can treat them in the same processing as we would the private building owners, it makes it a lot easier to dedicate more resources to helping them talk through their problems. That might not necessarily be data concerns, they might be more policy concerns. But because we have freed up the time and consolidated our channels, it's a lot more easy.

Adam Guzzo: That's great. All right. Well, let's turn to the audience's Q&A now and see what's coming in. And I'll ask Reid to join us back on screen. And Andrew, you as well, we'll do this all together. Let me

just go back to something that, Reid, you talked about in your presentation. And Andrew, you're really talking about here at the end, which is the idea of creating energy data champions.

People that care about this beyond just those who have direct responsibility in a sustainability or district department of environment or environmental quality office or state energy office, whatever. How you work to create those champions, and maybe talk a little bit more about that.

Because I think that's a really important part of this process, especially in large organizations, where there's lots of people that either have some responsibility over managing these facilities, have their hands on utility data. So how do you create sort of that champion culture within your organizations. And Reid, let's start with you.

Reid Conway: And so what I would say, Adam, to that is a lot of the folks we work with just need to be pushed a little bit to reach out to others. And so a lot of what I'll do is try and figure out who's doing what, and if I get a question, I can point that person to somebody I know who's already doing it.

I recently had an issue with a community college that was looking at some flow meters first of water. Already knew one of our universities had already gone through that process and was really happy with the devices that they had selected. And it was given them some real good data. So really, all I did was connect the community college energy manager to the university energy manager, and sort of saw my way out of that conversation.

And again, knowing that they can work together in finding out what's going on. And they can reach out to a peer and know that they're going to get good information. And it's not going to be cited like you might get from a particular vendor. So finding those folks who are willing to step out of their energy manager role and to really help others. And that's what we're trying to develop within USI.

Again, within the Appalachian Energy Summit, breaking down those silos that both communicate. A lot of times the energy manager or the facility maintenance director for one K-12 school may not know the person in the next county who's got the same job. And so part of my job is to try and get those people to talk a little bit so that they can interact and learn from one another.

Adam Guzzo:	Yeah. Fantastic advice. Andrew, do you have any further thoughts you want to share there? You talked about [crosstalk].
Andrew Held:	Yeah, I think the conceit of benchmarking policies in a lot of cases are to improve transparency and prove the data out there. But if no one's looking at the data, then what good is that data to the market? So I think breaking down the silos, like Reid was talking about and pushing organizations actually utilize the data and convene stakeholder groups.
	That's kind of why we created the Building Innovation Hub. Given that we want to bring together best practices for building owners, and they're not necessarily always going to be on their own. And so creating a space for them to come together, and also ensuring that when the Building Innovation Hub convenes people, they have basic information provided to them via the benchmarking program to start that conversation to understand who to talk to.
Adam Guzzo:	That's great. Let's turn to a more specific question. This one's for you, Reid, from the audience asking about what options are deployed today. I assume that means in North Carolina, to control plug load demand and MELs, or miscellaneous electric loads, for those who are not familiar with that term. Any insights you can share, Reid, on things you do there?
Reid Conway:	Yeah. To me, it's about culture. And if a one K-12 school, and they have quite a bit of plug load, you go to another K-12 school, they may not have any. And again, it's a culture. The biggest thing is, how do we drive that culture out. And so one of the things that we try and do is have an energy policy on what you can and can't have in a building.
	It's one of our standard responses to try and help folks, is they set up a program. For us, it's a no cost program to set up an energy policy, but it's not pain free. And so the enforcement is always the key to that. But a lot of times, they can get helped by working with the local fire marshal, and with working with your insurance company.
	Because a lot of these plug loads that come in, or miscellaneous electric devices, are not necessarily rated for commercial use. And so having some of these outside agencies who come in to help eliminate that. So always a big key, it lets them be sort of the bad guy versus you having to enforce an energy policy.

Adam Guzzo:	Yeah. Andrew, any further thoughts on that? I don't know if you guys have observed situations where you sort of have a policy or you've encouraged removal of those miscellaneous electric loads, and you've actually seen reductions and be able to show that to an organization or to a specific entity within the district. That would be another way in which to incent action, is to show that it has an impact on their bottom line.
Andrew Held:	I'm not sure if we have a specific example of bad occurring that I'm aware of. I know, in a lot of cases, we run a lot of very specific campaigns to target its upgrade to LEDs or installation of heat pumps, and we have a lot to show from that. And that plays out in the benchmarking data. I don't think that directly gets your question there.
Adam Guzzo:	Yeah, I may not. And it may be that that's not a focus of the sustainable energy utility, for example, in DC. But I could see a situation where they might identify that as a lower cost opportunity to reduce energy use in a number of these buildings. Let's talk a little bit about –
Reid Conway:	Yeah, so I'll add that North Carolina does have a space heater policy for state facilities, but it didn't necessarily apply to local Government.
Adam Guzzo:	Got you. Yeah. It's helpful when there's policy, like you said, to help drive action. And then obviously, there has to be some enforcement behind it and some other incentives. Let's talk a little bit about demand response. There's a question here for both of you about what are some of the hurdles for expanding demand response to manage loads?
	So we're sticking with this load management discussion. Is that something that both your organizations participate in? Do you have demand response programs from your utilities that you participate in? Do you run any of those at the state or district level?
Reid Conway:	Yeah, in certain instances, Adam, some of the universities take quite a bit of advantage of this. And so do the state agencies and locations to try and cut demand when they can. The biggest places are where the building automation system has a way to know when that meter is going to get read, and to be able to shed load across campus.
	And that's usually the way we see it done. Most often, is they're tied together to where they know what the demand is going to read.

And they've set a threshold of what the kW, how much demand they don't want to go beyond. And that's huge to be able to do it on the mechanical side, sort of seamlessly behind the scenes, so nobody really even knows it's happening. And they're already doing it. Does that make sense?

Adam Guzzo: Yeah, so to flip that, the hurdle would be if you don't have those kinds of systems in place, it's a much more manual process. It takes time and capacity in order to actually respond or participate in these kinds of demand response programs. I think what you're encouraging here is there are tools out there to help automate that process and make it seamless. Yeah. Is there anything you want to add on that one?

Andrew Held: So I mean, immediately not a full expert in terms of what our utilities are currently offering. I know there's paper performance programs run by the —. For years, our actual utilities were barred from running incentive programs in the district. And that is reason they've changed. And I'm not totally up to date on landscape. So I'm not.

Adam Guzzo: No problem. But I tell you what? I think we'll leave it there as far as questions. I'm going to close us out with a few additional slides. Thank the audience for your questions. Reid and Andrew, thanks for answering those. Stick with us here for the last few slides, folks. And we'll walk you through some additional resources that I think will be of interest to you.

So as I mentioned before, there's a recording of all the webinars in this series. The first two parts, one and two, are already up on the Better Buildings Solution Center. You can find those in the link at the bottom of this slide. The third, today's webinar, will be up shortly. So I encourage you to take a look at those if you missed some in our series.

Or encourage colleagues that you're trying to create champions in your organization about the value of data driven energy management. Hopefully, these webinars can be a resource for you for that purpose as well. And then on the next slide, as I mentioned, are some additional tools and resources. So a lot on here, you'll get these slides, you'll be able to click on these links.

The first two are the things that we talked about today, go short factsheet on the Energy Data Management Guide in addition to the actual web-based tool. We also have a number of resources on our State and Local Solution Center here at DOE focused on

implementing data management. So I encourage you to check out that part of our website.

Andrew mentioned that we have a number of tools available from DOE that are free, that can help you manage, analyze, and share your building energy data. Those can be found at a new website we just launched called Building Performance Tools. SEED is one of those tools we talked about today that's featured on that website.

A number of other resources here, and I'm not going to go through all of these. But again, I would encourage you, depending on where your interest lies and what your needs are, there's probably a tool or resource out there to address that topic. So check out some of those. And a number of these resources on this slide and others are featured in the Energy Data Management Guide.

That's one of the things we tried to do is bring those together into one place to make it easy for you. On the next slide, I will encourage you to check out our past and upcoming webinars in the 2021/2022 Better Buildings Webinar Series. We got a great lineup of presentations all the way through April. We're going to cover topics such as assessing and reducing embodied carbon, to job training and career awareness strategies for workers in the build environment.

So lots of other topics I imagine of interest to many of you. So check those out and see the link there where you'll find out more about that. And then we've got on demand webinars as well. So you can check out past webinars, including the ones from this series and others on demand, Better Buildings' webinar page. So if you've got other topics you're interested in, we've probably covered those at some point.

So I encourage you to do that and you can explore by topic. So I'll just close this out. It's noon Eastern Time by saying thank you again to our panelists. Appreciate your time, appreciate your willingness to share your insights and your expertise. If you've got additional questions for them, or for me, there's our contact information. Feel free to reach out.

I also encourage you to follow the Better Buildings Initiative on LinkedIn and Twitter in order to get you the latest news. And you can see how to do that on the left-hand side of that slide. So you'll get an email notice when today's recording slides and transcript are available on the Better Buildings Solution Center. And with that,

I'll say thank you. Thank you, everyone. Have a great Thursday and a great rest of your week. Take care.

[End of Audio]