

Lauren Pravlik: Hello, and thank you all for joining this morning's webinar. We're going to give folks just another minute to log in and get settled here, and we'll be starting shortly.

[Brief pause]

All right, we'll go ahead and get started. Hello, everyone and welcome to the Better Buildings Webinars Series dedicated to bringing you the latest actionable insights from leading industry experts. This annual series is a chance to explore the topics, technologies, and trends that affect your organization as well as efforts to accelerate decarbonization and energy efficiency adoption. Next slide. Today's webinar is called "Financing Solutions that Improve Efficiency in Both Energy and Water: A Focus on Hospitality."

Before we dive in just a couple of housekeeping remarks. Please note today's webinar will be recorded and archived on the Better Building Solution Center. We will follow up when today's recording and slides are made available. Next, attendees are in listen-only mode, meaning your microphones are muted. If you experience any audio or visual issues throughout the webinar, please send a message via the Q&A box located on the bottom of your Zoom panel. Next slide.

All right. With that, I'd like to introduce myself I will be serving as today's moderator for the webinar. I'm Lauren Pravlik. I serve as the Senior Director of committee initiatives and member relations at the American Hotel and Lodging Association, also known as AHLA. And I worked very closely with members of our sustainability committee pushing the needle on many of the environmental focus points of the ESG universe.

So quickly, on the next slide, I just want to give a little bit of a lay of the land in terms of the hospitality sector, where AHLA supports the industry, and some quick insights into how many of our members in the industry are approaching the ESG universe. And then we'll hear from some great experts in their respective fields to take a deeper dive on some of the financing and impact pieces as it pertains to energy and water efficiency implementation.

So with that, if we go to the next slide, I'm just kind of a quick lay of the land in terms of who AHLA is. We serve as the voice of the US Hotel and Lodging industry. We are the largest association in the lodging space representing just over 30,000 hotels in the United States. But we really are here to serve as a voice and

extension for the industry at large really kind of being that that uniting front, both from an advocacy perspective, but certainly from a variety of different initiatives and platforms that we provide on behalf of the industry.

And then really serving as that communication arm as well both to internal stakeholders, but also to outside key entities, whether that's policymakers, investors, and certainly the guest side of the industry as well. So on the next slide, just kind of wanted to give a little bit of insight into how the hotel industry is structured as it is a little bit unique in nature, compared to other industries. So many of you are probably familiar with some of the larger brand-named entities. They work very hand-in-glove with the ownership groups and REIT side, or in some other verticals also known as the "franchisees".

And then really the were the management companies come into play are serving as the day-to-day operators and employers, so really boots on the ground helping to ensure that all those guests stays are memorable and having some of those more significant impacts on the day-to-day from an ESG perspective. Then there's also obviously a wide variety of independent properties, you know, size and scope, different in nature based on location, you know, all the way from larger entities like those listed here, to bed and breakfast.

So if we go to the next slide, just to kind of iterate where AHLA currently serves in the field and how the industry comes together in a lot of instances. Again, just through kind of continued education and promotion to the industry, we are, you know, constantly trying to be at the forefront of any core issues that are popping up, providing that education and context to our members in a timely manner, and ensuring that it provides the opportunity for the hotel industry to strategize accordingly and be proactive in this space.

If we go quickly to the next slide, some of the ways that we go about that is providing, you know, reports to the industry and research through a variety of different lenses. Certainly through one key channel is our state-of-the-industry report, which we provide at the top of the year and mid-year point, just to give context to how the year is progressing, and various trends that we're seeing, and so on, and so forth. Many of these resources are available on the AHLA website for folks that are interested in learning more information.

If we go to the next slide, just real quickly to connect the dots here. We also have a foundation, a 501(3) arm that is working very much hand-in-glove with the workforce side of the industry. So really bringing together many of those social initiatives and platforms here at the association, whether that pertains to workforce development at a state and localized level, or our No Room For Trafficking Program bringing awareness. And again, various training programs for the industry at large as it pertains to human trafficking.

And certainly also, many of our DE&I tools and initiatives are publicly available for the industry to take advantage of as they continue to have an impact in their spaces as it pertains to their respective goals and metrics. So from that end, you know, really just to kind of tee-up today's conversation, we'll hear from three experts kind of how all these areas delve together. But for context, the hotel industry certainly is not new to the world of sustainability.

From an environmental perspective, as with many other verticals, folks have pledged and made commitments, are working on SBTIs, working with organizations like the Department of Energy and others to ensure that they are being proactive, finding the most efficient and best practice space to really continue to move the needle.

So with that, we'll start off just with, if we go to the next slide, some initial points to get a look and feel for who is on today's call. So we'll be using an interactive platform, which some of you may be familiar with. But if you go to the website listed here, www.slido.com and hit the event code, #DOE. This is where we'll be asking questions later of our panelists during the presentation. But you'll also see that there are some thumbs-up icon opportunities if there's questions you like. That'll help move questions up higher in the queue as we get to that portion of today's program.

But first, we want to start off learning a little bit about the audience that is on the line. So we'll do a quick poll here via the Slido. So hopefully everyone's seeing those pop up. And we'll give everyone just a minute. Great, looks like we got a good mix of attendees, but lots of contractors and consultants on the line. Perfect. If we move to the next poll question. All righty. When planning and implementing projects, what tends to be your biggest challenge?

So kind of weaving in a lot to today's conversation. I'm sure we won't be surprised by some of the results here. *[Laughter]* Perfect. Well, glad to see that the poll that's leading on financing is the topic of today's conversation. Great. Well, thanks, everyone. All right. Well, I'll go ahead and tee-up today's speakers. Excited to have a great lineup. Tara O'Hare joins us from the Environmental Protection Agency's WaterSense. We've got Paul Bienstock from Citibank, and then Sandeep Thakrar from NEEMA Hospitality.

So each of our presenters will kind of go through keynote and high level topics from their respective lenses to provide great insight, and then we'll bring the group back for Q&A here at the end. So with that, I'd like to hand it off to Tara O'Hare, our first speaker who serves as the implementation and commercial operator lead for the EPA WaterSense program in Washington, DC. Tara has worked on WaterSense for the past 14 years and is responsible for program operations, partner Support and outreach to commercial and institutional facilities. So with that, Tara, I'll let you take it away.

Tara O'Hare:

Thank you so much, Lauren. Next slide, please. We're going to talk a little bit about saving water with WaterSense. Next slide. So to introduce you to the WaterSense program. If you're not familiar with us, we've been around since 2006. And our goal is mainly to provide simple ways for businesses and consumers to find water efficient products, programs, practices, and homes. The WaterSense label is the one that you see on the right-hand side of your screen, and it is found on products that save at least 20 percent of water and perform just as well as the standard counterparts.

Back in the early 90s when low flow products hit the market, they didn't all work very well. So each one of our specifications requires a performance test to make sure that it performs just as well as its standard counterparts. Next slide. So the WaterSense label can be found on about 41,000 different product models, and all different price points, and styles and colors. And we have them in eight different product categories that are used in both commercial and residential facilities.

So we have flushing urinals, showerheads, flushometer valve, and tank type toilets, as well as laboratory faucets, and irrigation controllers, both weather-based controllers that are getting data from a weather station to determine if watering is needed, as well as soil moisture-based controllers, which have a sensor that goes into the soil to determine if there's watering that is needed. We also

have what are called spray sprinkler bodies, which control the pressure within a sprinkler head to make sure that it's at its ideal point. And then we also have WaterSense labeled homes.

Finally, we've worked within the ENERGY STAR Program, our sister program, to include water factors in many of their specifications. So when you're looking for products, look for the WaterSense and ENERGY STAR labels. And you'll find products that save you both water, energy and money. Next slide. So the WaterSense program has a rebate finder that we get information from our partner organizations or our utilities and local governments. It's only a partial list, so I encourage you to check with your utility to see if there are rebates available in your area.

We also have many different gas and electric utilities that provide rebates as well. So I encourage you to check all of the different utilities in your area to find out what's available. There is a national database of electric and gas utility rebates called DSIRE, so you can check that out as well. And then also, sometimes there is an opportunity for custom rebates especially for larger projects that are being done in commercial buildings. So it may be worth contacting your utility as well just to see if they have custom rebates available. Next slide.

So WaterSense has a whole bunch of resources available to help both commercial and institutional facilities save water. We have information by facility type, as well as our Best Practices Guidebook, and a bunch of assessment tools, worksheets and checklists. And then I do a series of recorded training webinars that happen throughout the year on different water efficient topics. And next slide. You'll find it all on our website. So just to give you a couple of ideas for getting started, we have a couple of water assessment checklists and operation and maintenance checklists that are available, as well sample worksheets to help you collect the data that's needed to do a water assessment. Next slide.

The O&M checklist is about operation and maintenance opportunities. And we created this basically so that you could print it out and carry it around the facility, and actually see what things might be needed to change or different opportunities to save water. So it's just a really simple way to figure out what you could be doing in these different spaces within your facility. Next slide. So we have our best practices guidebook called *WaterSense at Work*, and this includes basically every water saving or water using technology within a commercial facility. And there's information on what to do to operate and maintain that product or technology,

as well as things to consider when you're doing a retrofit or replacement project.

So it's pretty lengthy. It's about 300 pages, but it has all the information that you could possibly need for these different water-saving projects. And they include things like water management planning, as well as water monitoring and user education, sanitary fixtures and kitchen equipment, outdoor water use and mechanical systems, as well as lab and medical information. And then we also have a best practice onsite alternative water sources. So that's another opportunity as well. And we're in the process of updating this guidebook as we speak, so we'll have that posted online as well. Next slide.

So we also have some hotel-specific resources that are available. We did a Hotel Challenge a few years back. So we created some really specific things to help hotels. The Hotel Challenge is over, but you can still use the information and the tools and resources to help you save water. So one of the things that we wanted to get everyone on board with was doing a water assessment to identify key water using areas and savings opportunities. So we created some Water Assessment Worksheets, as well as an Excel-based tool to help prioritize and identify water efficient projects. And you can find that on the link that's down at the bottom. Next slide.

So the Water Assessment Worksheets is basically something that you can either print out and carry around with you in the facility, or you can use the available PDF version on a tablet. And this is basically, it's a writable PDF, and it guides you through each part of the facility to figure out what things might need to be changed in that area, and to collect the data about those types of fixtures. So each one is a section in our WaterUSE Tool, which I'll get into in a moment, and the information that's in the metering section can be uploaded into energy stores Portfolio Manager for tracking water use over time.

And the portfolio manager is basically a – it's a tool that's online and is used to organize and track water use and energy use over time. There's also a water waste or an actual waste module as well. So those are just some options to kind of organize the information and track the water use over time. Next slide. So the water use tool is an Excel-based tool that is basically used to gather the information that you need to identify projects within your facility, and how much you can possibly save from those projects. It includes information on estimating water use from each end use area within your facility, and gives you some options for some

water efficient fixtures and equipment retrofits or replacement projects.

And then it will guide you to the specific best practices in our Best Practice Guidebook to figure out how to reuse water and energy. It also calculates potential savings from your potential projects, and it allows you to enter information on your utility rates so that the information is customized to your specific facility. And it includes estimated water, energy and cost savings from the changes, and it will give you a projected payback period as well. Next slide.

So the Waters Wednesdays is a series of trainings that I do throughout the year, we're in partnership with the ENERGY STAR Program. And we have several that we've done already this year on different topics, and we have a few that are coming up. So we have one coming up on multifamily buildings, and then one of which is a deep dive on cooling tower efficiency in November. And finally we're doing one on evaluating water use in capital improvement projects. And that will happen in December.

So if you're interested in the webinars that we did previously, throughout the year, the information is recorded from the past webinars. And you can find it at the links that are there in the slides. And I believe you will be getting a copy of the slide deck at the end of this presentation so that you'll have access to these links and items. So you don't need to write them down now. Next slide We'll also be repeating a lot of the webinars in the next year in 2023. So if you want to listen to it live, you're welcome to do that as well.

So they asked me to provide an example case study for some of the savings that can be expected in water efficiency projects in hotels. So I wanted to put together one on the Palacio del Rio Hotel, which is in San Antonio, Texas. And this is a project that was done, the hotel is relatively older. It was built in about 1968. And there have been some minor retrofits and replacements that were done over the years. But for the most part, the technologies were pretty old. There are about 470 guestrooms in the facility, and they started upgrading their restroom fixtures and the guestrooms basically in 2007

So they were able to upgrade and use WaterSense labeled toilets, faucets, and showerheads. And they also did some retrofits and replacements of water-cooled ice machines. So we put the information here, so you can see what changes were made, basically the original efficiency, as well as the retrofit efficiency

and the number of units that were replaced. So you can see it was a pretty big project that they were able to do it in partnership with their utility, the San Antonio Water System, or SAWS. And so they were able to make some, some significant changes and save some water and energy at the same time.

And they were able to replace some of their ice-cooled – or excuse me, water-cooled ice machines. These were all single pass cooling, and basically, that's where water is just used once to cool the machine, and then it's discharged to the sewer. So it's one of the most inefficient ways to cool a system that exists. And so they were able to switch to an air-cooled machine in most of those locations. So they were able to save quite a bit of water in that area as well. Next slide.

So they were able to reduce occupant water use by occupant room from 209 gallons to 107 gallons, which is a huge reduction. And it was just from doing the toilets, faucets, showerheads, and the ice machines. So they were able to get a 49 percent overall reduction in water use. And they predicted originally that it would save them about 24 million gallons of water. But the actual savings was actually 26 million gallons of water per year. They were able to also save quite a bit of electricity, especially from a lot of the showers and faucets.

And they were able to save 480,000 kilowatt hours of electricity. And this came out to be \$160,000.00 in water and sewer and energy savings per year. It was about 80,000 for water and sewer and another 80,000 for energy savings. And they were able to do this in partnership with their utility. So they've got a significant rebates for this project. This is I believe one of the custom rebates that was done from San Antonio. And so the utility spent about \$110,000.00 on the upgrades. But if the hotel had to do it themselves, it would still be a two-year payback period. So it's a pretty significant savings, and it pays for itself relatively quickly. Next slide.

So this is the contact information for WaterSense. If you want to get more information, you can visit our website. We also have Facebook and Twitter. And you can contact our helpline if you have specific questions. So now I'll pass things on to the next speaker. Thank you.

Lauren Pravlik:

Thanks so much, Tara. Good reminder how much of an impact water plays on energy usage. Just a reminder for folks, please utilize the Slido feature to ask any questions of Tara or any of our

panelists, and we'll address those towards the end of today's presentation. So with that, I'd like to introduce Paul Bienstock, Director at Citi working with the Clean Energy Finance Group. Paul has been with city for ten years and is responsible for implementing innovative resource efficiency and renewable energy solutions for corporates and institutions. So welcome, Paul.

Paul Bienstock:

Hi, thanks for having me. I'm having some difficulty with my camera here. There we go. Thanks for having me. I'm gonna talk about efficiency as a service. Efficiency as a service as an innovative financing structure that helps property owners, tenants meet resource efficiency and environmental goals to acquire new and better performing equipment. Can you please move to next slide.

So it's often interesting to talk about how Citi first became introduced to the project, to the structure and how we use it ourselves, which was that Citi's operations and technology and sustainability team was completing projects that were outpacing what internal treasury and finance were willing to sell finance. So they were often completing projects that had quick paybacks and were of a small nominal value. And they had a project at hand at a datacenter that we operate in London that had a very long payback and a large capex to the point where treasury was not willing to put capital to work for that project.

So they came to our group asking about alternative financing structures, and that was our first use of as a service. The key features of the structure are that it's zero capex upfront. There's no balance sheet impact, meaning that it's off-balance sheet. From an accounting standpoint, we have experience with different accounting standards, obtaining that desired treatment. And then it frees up the cash to be used for core business activities, which is often desirable from the Treasury standpoint. We also have experience in terms of blending projects together.

So that could be different facilities as well as different technologies in one facility. This creates benefits from a scalable standpoint, as well as allowing turnkey delivery and removes all the administrative burden from the host as well. One final point that I'll mention here is that the measurement and verification protocols that are embedded within the contracts allow for verified savings to be stated, this is important looking forward as ESG regulations and 10k from the SEC is going to mandate you know verifiable standards. So using this structure will allow for verifiable savings to be reported on 10ks.

Looking at the top left of this slide is a structure diagram. Essentially what happens is that Citi and an efficiency partner will create an SPV. Typically, Citi will finance about 80-90 percent of the project cost. The efficiency partner and/or equity will provide 10-20 percent of the project cost, and will purchase the equipment and installation of this equipment upfront from the energy service company. This is important as it also allows for a true sale recognition from the energy services company, removing the items from their balance sheet and allowing them to recognize true sale.

On the flipside, a services contract will be put into place with the host stipulating the technologies that will be implemented and the rate of payback for each unit of resource saved. I know we're talking about water here. But it's important to recognize that this can be used for any resource, so energy, water, etcetera. Can you please turn to the next slide. So as I mentioned, you know, our first use of this was on ourselves, which is often compelling, as we know that this works, and that we can get the desired accounting treatment. So you know, that that's really important, in my opinion.

Also, we have extensive relationships with different corporations from a treasury perspective, which is often beneficial, as well as energy service companies and efficiency partners, and we have the connectivity to help bring the project together from the beginning. One important note too that I'll make is that on previous projects, we realized that oftentimes, operators or hosts don't own the underlying facility. They lease the space. So we develop the landlord consent process, thereby allowing us to implement improvements at a space where the host has an underlying lease, and we can work with the landlord to make these improvements and get comfortable from a security standpoint.

Finally, we often find it compelling to make improvements on a piecemeal basis, whereby we could create tranches of financing, allowing for geographic benefits to the extent that, you know, facilities are in different geographic locations. We can get weighted benefit from a payback perspective based on the underlying temperatures, geographies, and other mechanisms. On the bottom here, it's just showing all the resources that we've worked with, all the technologies. Again, you know, have experience in a wide range of technologies and different resources, including water. And then next slide, please.

So here, I just want to show a structural comparison between EAS and leasing, which is now viewed as on-balance sheet by accounting regulators, as well as cash purchase or traditional debt

financing. Again, there's no upfront cost with this. It has positive cash flow impact as savings are the source of payment. So to the extent that savings aren't created, there is no payment required. And there is underlying performance guarantee based on the performance contract that's also in place. Again, as this differs from a performance contract, this is not a hell or highwater payment. The host is only responsible for the savings that are actually created. In the event of a shortfall, the SPV will be responsible for going to the and working with the performance contractor to make the shortfall payment.

And finally, one other thing that I'll mention are the environmental incentives and rebates that are often possible to be achieved with different projects. The burden with respect to obtaining those benefits are offloaded from the host and passed to the SPV, thereby alleviating the administrative burden that's associated with these types of projects. One other thing I'll mention that's not shown here is PACE financing often comes up. You know, PACE financing is very similar to leasing in a lot of ways except for how to, you know, payments are determined. But from a comparison standpoint, it's important to note that PACE is oftentimes is not viewed as off-balance sheet, which can be a hindrance to operators, and the performance savings are not guaranteed as well. So I'll pause there and pass it back. Thank you very much.

Lauren Pravlik:

Great, thanks so much, Paul. All righty. Well, we'll move on to our final speaker. I already see some questions coming into Slido, so we'll address those right Sandeep's presentation. So pleased to introduce Sandeep Thakrar NEEMA Hospitality. He leads the organization in areas of acquisitions operations, revenue management, and sales and marketing. Sandeep has over 20 years of business experience outside of the organization with large companies such as American Express and Accenture, and many entrepreneurial companies as well. So very pleased to have you share your expertise with us, Sandeep. I'll turn it over to you.

Sandeep Thakrar:

Okay, thank you. Again, my name is Sandeep Thakrar. I'm the president of NEEMA Hospitality. I'm pleased to be here today. We own and operate 12 hotels in Pennsylvania, Maryland, and West Virginia. And we are a franchisee of Marriott, Hilton, Choice, and IHG. If you could take it to the next slide, please. We were recently approached by a consultant who had an opportunity to evaluate our water usage at all our hotels. And we decided to do a demo project at one of our older locations in Ecolodge Inn & Suites in Triadelphia, West Virginia Suites. It has about 113 rooms. If you could continue the slide.

So this property is an older property, probably 50 years old. And prior to the installation of the project, we were averaging about 268 gallons per day per occupied room. Our average bill was roughly close to \$6,000 a month. And the vendor that we were approached by, they came in, and at no cost us up front, they, next slide please, they replaced all our toilets with new water efficient toilets that used 0.08 gallons, instead of the ones we had, which were maybe four gallons. They also retrofitted our sink aerators and showerheads with new brand-approved low flow fixtures.

You know, we have 113 rooms and they pretty much did the entire project in one week. And they also checked all the leaks and drips in every room. And they put in new fixtures as necessary. As I mentioned upfront, there was no upfront cost to us, and so it was a Shared Savings Program. And you know, they measured the prior usage to the installation. And they every month we have to share our water bill and our occupancy, and then they calculate kind of an amount that we owe based on the shared savings. So they also come back once a year to look at all the fixtures and all the toilets and make sure everything's working properly. They will come additionally if there's big problems.

So we expect the contract to be paid off in two years. And then after that, we get to keep all of the savings. So based on the initial success of this, we plan to continue this at other hotels. And I've been approached by other hotel management companies who are very excited about this too. Next slide, please. So in summary, we went from 268 gallons per day to 87 gallons per day per occupied rooms. And I just got the bill for the following month, and it's even higher. It's at 70 percent now. But the first month we were at 67 percent usage savings, and a 62 percent cost savings. So that's obviously a dramatic difference from where we started.

So I'm very excited about the first few months. Again, we just installed this project in July of 2022 so it's still early in the process, but the first two months have been very exciting. And so our water sewer bill is 33 percent lower than the previous 12 months average, and we've doubled the occupancy. So that's amazing. Obviously, some of the usage from last year was during COVID. And now as COVID has waned, our occupancy has gone up. But our water bills are still lower than previously, because of the energy or the water efficient technologies we put in. Next slide, please.

In addition to that water saving project, we, at another one of our hotels, a Quality Inn and a Holiday Inn Express in Selinsgrove, Pennsylvania, we did a test on two hotels, where we installed

sensors that go in all our toilets. And that way, we can see if there's leaks or flow that's just occurring, and the toilets constantly churning, which can use up to 5,000 gallons per day if that happens. You know, we do have maintenance folks at our facilities, and they're supposed to check every room, every quarter, but they may not get to a room for 90 days. And you know, if a toilet is just leaking, it can add to substantial cost to us. Next slide, please.

So this company approached us, and in this situation, we just paid for the technology upfront. But leaking toilets are the number one source of wastewater for hotel owners. The guest has no incentive to really tell us about that if it's happening. And again, if the maintenance and housekeeping department do not inform us, and toilet can leak. And a stuck open flapper valve, I was told can cause up to 5,000 gallons per day of wasted water. So monitoring this on a daily basis. And getting alerts when there is a leak is very beneficial to our maintenance department because they'll just get an alert. They know what room it is. They go to that room and they fix the issue. Next slide, please.

We do have a Web-based dashboard that we can go log into and see kind of all the usage of all the toilets and what the gallons per day is for each toilet. So it's an easy way to kind of see if there's any issues. And then like I said before, if there is a problem, we will get an alert. The little sensor, you can see on the right in the picture, it's very small. It's on the top of the bottom of the toilet there on the top of the valve. And so it's not noticeable by the guest. It's just a sensor that shows how much water is flowing on a daily basis. Next slide, please.

This shows kind of the, you know, alerts we've gotten at different times. So you can see there's been some spikes, and that's when we, you know, you can tell how many flushes there were, how many flapper leaks, and how many stuck leaks. And so obviously, when we get one of those alerts, we're highlighting it to the general manager and the maintenance department. They also get an e-mail, but you know, they're busy so we send a second alert to them to make sure someone addresses it. It helps us prioritize, you know, which toilets we should be installing new flappers and valves for or replacing toilets eventually. Next slide, please.

So that's a summary. My contact information is here. If you have further questions. I know we're going to be going to questions and answers next. So thank you for having me today.

Lauren Pravlik:

So much Sandeep, and to all of our panelists. Quickly before we transition to Q&A, I wanted to encourage you all to download the additional resources handout that's going to be shared via the chat function at the at the bottom of the Zoom platform. This handout contains links to resources from Better Buildings and our speakers on today's topic. So hopefully folks find that useful. And just a reminder that we are recording today's presentation. So we will follow up with the recording link and the slides for folks to be able to access.

So now I'd like to invite all the panelists to come on video, and we'll start the Q&A session of today's webinar. Just a reminder, if you do have a question, please submit those via Slido and we'll keep tabs on them. Let me pull up, I know we've had quite a few already start to come in. Um, so Tara, first question might be for you in terms of how were water efficiency measurements developed and defined over time.

Tara O'Hare:

So they're developed over time mostly from tracking water use, whether that's on your bill or sometimes the utility has a portal where you can get information on your actual water use directly. And so if you are in a major city, there's most likely what's called an advanced metering infrastructure that's put in place so that you can get information on how much water is being used in your facility. Sometimes it's by hour. Sometimes it's more granular than that.

If that isn't available in your facility, you can use submetering or flow metering that are basically used to get spot checks, or the submeters, often, you can just put them on anywhere in your facility to track your water use. One good thing about submeters is that you don't need an actual separate utility account for that. In the water world, you can just use it for the internal use only, and that can help give you some of the metrics that you need. If you're considering doing a project on one specific area or on a specific technology, you can use flow metering to check on how much water is being used in that area.

And so those are the ways that you can usually calculate some of that savings that would be predicted and get a sense of how much water is actually being used. And that way, you can use that to calculate how much potential savings you need and track it over time to present it to your management.

Lauren Pravlik: Great. Thanks, Tara. Paul, next question directed to you. Do EAS providers research and utilize local rebates as well? If so, do they also complete the rebate process on behalf of the customer?

Paul Bienstock: Yes, that's correct. So they do, you know, work in whatever jurisdiction that facility is lying in. The cash flows are transparent. So savings are passed along partially back to the host as well. They will have that lens into the rebates that are being received. And, you know, really, it's the administrative burden responsible with achieving those rebates and obtaining them, that is offloaded which is often desirable. But all the cashflows are very transparent in the process, as it often helps the overall payback and shorten that payback, which is desirable from all counterparts.

Lauren Pravlik: So along the same lines here jumping down to Andrew's question, are there any owner or occupier entities who are not a good candidate to engage with an SPV or EAS? For example, can state and local government entities, nonprofits, and other noncommercial organizations be good candidates?

Paul Bienstock: Yeah, it's really available for anyone. You know, there are some credit, underlying credit matrices, which are important to hit thresholds for. That being said, we've developed a process whereby we can get a credit rep through insurers to help those entities that have lower credit standings. But you know, this could really be used for any sort of municipality, public or private, or corporate.

Lauren Pravlik: This next question at the top, I'm not sure anyone that yet has the answer to but I'll open this up to all the panelists. Has anyone determined the short-term and long-term environmental and sustainability impacts and/or opportunities related to the Inflation Reduction Act? I know probably a lot of conversations and factfinding happening behind the scenes, but how are your organization's approaching this? Or, you know, certainly from Tara and Paul's perspective, what are some of the resources that you're putting out there to clientele as well?

Paul Bienstock: I could take a stab at this first to start off. Yeah, so we're very involved with what's going on with the IRA and the benefits that can be created for clients. You know, we're putting materials together that, hopefully soon we'll be able to share. But, you know, part of this is, you know, DOE, you know, grants that are available for new construction, especially with respect to, you know, battery facilities and things of that nature.

But again, what we often find is that there's always some sort of budget at the end of the day. You know, the DOE grants are still, you know, a form of lending. And at the end of the day, you know, there might be technologies that fall outside of scope. So, you know, irrespective of what the overall budget is, there might be technologies that are desirable that will make for a more robust facility from an ESG standpoint, and different financing solutions blended together are often, you know, attractive and desirable to make the most robust facility possible, whether it's Greenfield or Brownfield.

Tara O'Hare: Yeah, and I can talk a little bit about the Inflation Reduction Act had a significant amount of funding that's available for water and wastewater utilities throughout the country. And some of that will be used for projects that are to improve the facility itself, the wastewater treatment plan or the water treatment plant, but some of them are also using that money for rebate programs. So that is something that we're promoting as that funding is being distributed that some of that money can be used for rebate programs. So that could be something that's available in your area as these grants go out. But other than that we don't have a specific, you know, guide, resources or anything related to the Reduction Act.

Lauren Pravlik: Sandeep, is this something that NEEMA Hospitality is starting to take a look into, and where some of those rebates and tax incentives may fall from a state and/or localized level?

Sandeep Thakrar: I mean, given, you know, my job is to run and operate our hotels, I rely on the vendors to provide a lot of that data for me. So a lot of vendors do approach me with different rebates, especially in the utility side. On the electric side, there's a lot of rebates available for energy management systems, and lighting, and things like that. So I rely on the vendors to help me with that.

Lauren Pravlik: Definitely a collaborative lens for folks in the industry. Sandeep on the same, or a question for you, I guess, are there any resources available for the installation of the toilet-monitoring sensors that you mentioned?

Sandeep Thakrar: The vendor put those in for us, but it was a very simple installation. Our maintenance team could have done those. It's literally unplugging a valve putting something on top of it and replugging it. So I probably could have done those myself. But given us the first time we were doing this technology, they came in and did the installations for us.

- Tara O'Hare:* [Crosstalk] can you think of any specific rebates for the monitoring sensors that that could be an example of a project that may be a custom rebate for the facility. So I encourage you to contact your utility to find out if something's available for you.
- Lauren Pravlik:* Then it looks like we have a question on residential high rise buildings, and can they benefit from water saving protocols as well?
- Tara O'Hare:* Yes, they, we have the same products that can be used in a residential high rise building as can be used in a hotel. So you can look for the WaterSense products and get savings. There's also a one-to-100 score that's available through the Portfolio Manager Tracking system, and that can give you kind of a grade on how well you're doing compared to other facilities. So that's something that's available to just kind of check to see how you're doing compared to others. And we're doing a specific webinar for multifamily buildings now in about two weeks. So I encourage you to join us for that.
- Lauren Pravlik:* Sandeep, [laughter] folks want to know who the vendor is for your toilet sensors.
- Sandeep Thakrar:* That's Sensor Industries. And if folks want to e-mail me, I can make an introduction.
- Lauren Pravlik:* Try to send some business their way. [Laughter]
- Sandeep Thakrar:* Yes.
- Lauren Pravlik:* Tara, I don't know if you recall some of the stats off the top of your head on the savings from the hotel case study that you mentioned. But just a reminder to folks that we'll send those slides around, but if you just want to re-highlight some of those pieces quickly.
- Tara O'Hare:* Yeah, sure. So they did replace the toilets, faucets, and showerheads in their guestrooms, as well as the ice machines in different parts of their facilities. So most of the replacements were done in the guestrooms, but they were able to make about 49 percent reductions in water use, and get their savings down, or the actual water use per occupied room down about 100 gallons per day, which is a really impressive savings. So that's just to show you that making those changes in your guestrooms can be really impactful. Even though it seems like a small thing, it can be really impactful.

Lauren Pravlik: They say numbers don't lie. *[Laughter]*

Tara O'Hare: Yes. *[Laughter]*

Lauren Pravlik: All right, Paul, how are qualitative and quantitative econometric research done regarding EaaS? Oh, Paul, you're on mute.

Paul Bienstock: Apologies. So typically a client has awareness, you know, through the operations teams of the projects that they want to complete and the technologies that they want to install. So, you know, from that side of the equation, you know, there is awareness. Again, this really comes down to financing and the fact of the matter that at some point in time, there is a budget constraint, underlying you know, whether it's a greenfield project or a brownfield project, and how to make the most robust facility possible.

And then from a, you know, quantitative perspective, you know, the savings are real. Again, it's based on performance. And the fact that there is, you know, some guarantee associated with those savings often makes it desirable knowing that there is someone on the hook, typically a well-established energy service company responsible in the event that there is some sort of, you know, shortfall with respect to those savings.

Lauren Pravlik: Follow-up question. Can the advocates of the EaaS benefits find durable evidence for each of those four claims of benefits?

Paul Bienstock: So I believe that has to do with the zero capex. Yeah. So, again, there's no upfront capex. There's no fees associated with this type of financing. All the costs, including legal costs, are embedded into the construction costs or implementation of those technologies. The balance sheet impact, you know, we're prohibited from giving specific accounting advice, but I can tell you that through ourselves, our experience at Citi, as well as what our clients have done, we are certain that this can be achieved from an off-balance sheet accounting standpoint.

What we'd like to do is that we do have connectivity with different auditors. So depending on who the auditor is for a specific firm, we can often make an introduction internally at that firm to help create connectivity with somebody internally that understands EaaS. And to take the lens that, you know, this is very similar to PPA in reality, you know, it's just the savings that are created are the source of payback. And then, in terms of other benefits, you know, free up cash. I think that's simple enough. And the more larger projects, again, we really are advocates for blending technologies

and underlying facilities together to make the most robust, you know, project possible.

Lauren Pravlik: Quickly, who wants to define what SPV stands for?

Paul Bienstock: Sure, that's just a special purpose vehicle. So it's a special purpose company that's created to actually legally own and operate that equipment. So the SPV will be legal owner of that equipment during the tenor of the contract. At the end of the term, there are different options embedded in the contracts that allow for transfer of ownership to the host. And having the SPV be established and the legal owner of that equipment is really important from an accounting viewpoint.

Lauren Pravlik: Sandeep, direct question for you, did you decide to upgrade your buildings during the pandemic? And I'm going to add to that, if you did, why did you decide that was the right time?

Sandeep Thakrar: Well, I guess it depends what you call "the pandemic time". We did both of these projects this year. So I would say it's kind of past the peak of the pandemic. And, you know, in 2020, and first half of '21, we were trying to survive, so we weren't doing many building upgrades.

Lauren Pravlik: All right. How would building managers accurately measure the implementations, which are expected to yield the nine benefits of EaaS building services?

Paul Bienstock: Again, I think it's a similar answer, where, you know, the benefits are inherent in the underlying contracts. From the performance standpoint, again, the fact that payments are set based on you know, actual usage, due to the measurement verification protocol, which is embedded into the contract, there's a true-up essentially, that occurs. So there is, you know, whether it's real-time data that's gathered, or on some periodic basis, to go look at the actual usage of that equipment and the output of that equipment, that's what's used as the source to, you know, of payback based on the underlying rate for that unit of resource. So depending on the savings that are created, and the output, you multiply that times the rate that's agreed upon for the resource, and that's how the payment is constructed.

Lauren Pravlik: I'm gonna jump down a little bit here, obviously, because many states are dealing with conserve water statuses. Tara, is there any insights that you can kind of share there in terms of allocation for

resources to meet those needs and what that means when it comes to irrigation and landscaping?

Tara O'Hare: Yeah, there are quite a few different statutes that have come into place recently, and some of that is related to the drought that's been happening throughout the country. So there are some restrictions that are put into place when a drought is occurring, depending on the level of drought. So there may be some examples where outdoor watering is restricted or it's basically just restricted completely sometimes. So that's just something everybody kind of has to deal with, unfortunately. So they're trying to allocate those resources based on the water laws in the local area. And to make sure that some, you know, it's being done based on that.

Lauren Pravlik: All right, just being mindful of the time here. Probably time for one more question before we close things out for the day. Let's go with what calculations/sources is used for water usage efficiency, just to kind of further define there.

Tara O'Hare: So the calculations for water efficiency can be based on the current equipment that's in the facility. So what you can do is basically kind of go around and collect information on what your actual fixtures are using. And using some of the submeters and flow meters, you can get information on how much water is being used in that way. And then figure out if there are different retrofits or replacements that could be done to improve that water savings. So it can be done just based on the actual technology or product that you have, or you can do it using submeters and flow meters.

Lauren Pravlik: Then one final question, Sandeep, for you from the hotelier's perspective, any lessons learned or best practices having gone through this, this process at a few of your properties?

Sandeep Thakrar: You know, we're new to water conservation measures this year. You know, obviously, given the last two years were challenging. I wasn't used looking forward to using capex money for this. So the company we decided to work with has a lot of experience in the multifamily. So we're one of their first hotel kind of tests. And sometimes you just gotta take a chance on something, and try it. And we're extremely happy with the results, and I think the vendor is as well. And I think they're gonna have a lot of opportunities in the hotel industry because they took a trial on us.

Lauren Pravlik: All right. Well, thank you all so much for your insights and expertise that you shared with the audience today. Greatly appreciate you all taking the time. Thanks to those of you on the

line and for your fantastic questions. Just as a reminder, this webinar is a part of the Better Buildings Webinar Series. So quite a few presentations, as you can see the great line-up here for the fall and into early next year. So certainly visit the Better Buildings Solution Center for more information and to register.

The next webinar, or if we proceed to the next slide, highlighting specifically the next webinar on October 25th, coming up here shortly, titled "Leading by Example, Building Envelope Success Stories." So join this webinar to hear about successful deployment of high performance building envelope technologies. And again, that's on October the 25th at 11:00 a.m. Eastern. If we go to the next slide, just a quick reminder on the Better Buildings Better Plants Summit, which will take place April 11th through 13th, 2023.

This event will feature engaging and interactive sessions as well as opportunities for attendees to network with our fellow industry, peers, and experts. We will be in person for the 23 events in the heart of Washington D.C. Stay tuned as registration will be coming soon. Again, visit the Better Buildings Solution Center to learn more. Next slide. So again, with that, just like to thank our panelists. I know we weren't able to get to all the questions, so certainly feel free to reach out, you know via e-mail, given the contact information for everyone is provided here.

And I encourage all of you on the line to follow the Better Buildings Initiative on LinkedIn and Twitter for all the latest news. You can find their handles and respective icons on the left half of the slide here. And again, just a reminder, you'll receive an e-mail notice when today's recording, slides, and script are available. So appreciate everyone joining us this morning, afternoon, wherever you're joining from. Thanks again to our panelists and certainly thanks to the Better Buildings team for organizing this great session. I hope everyone has a great rest of your day.

[End of audio]

Financing Solutions that Improve Efficiency in Both Energy and Water: A Focus on Hospitality

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