Joe Indvik: All right, let's get started. My name is Joe Indvik and I'm with the US Department of Energy's Better Buildings Initiative. I'd like to welcome you all to the December edition of the Better Buildings webinar series. In this series, we profile the best practices of Better Buildings Challenge and Alliance partners and other organizations working to improve energy efficiency in buildings.

So today, I'm very excited to say that we're covering financing for energy efficiency projects, a subject that's near and dear to my heart. Specifically, we're going to be talking about how to find financing, access incentives, and get projects done. So this webinar I think will be broad enough that it will be useful pretty much for all sectors, including commercial, industrial, government, and there's even some information here for the residential sector as well.

A quick logistical note. We will have time for Q&A at the end of the hour, so through the miracle of 21st century technology, we no longer ask our questions verbally, so please enter your question textually in the chat box that you see on your webinar screen and we'll try to get to as many of those as we can. So feel free to enter your question throughout the webinar and if your question is for a specific speaker, please note that person in your question.

The second thing to be aware of is this session will be archived and posted to the Web for your reference, so we'll e-mail out a link to the archived webinar at a later date.

So with that, I'd like to introduce our speakers very briefly. As I said, my name is Joe Indvik and I'm with JDM Associates. Also today, we have Brenna Walraven from Corporate Sustainability Strategies and Billy Grayson from Bent Branch Strategies. So Billy and Brenna are frankly two of the smartest people I know on the topic of energy efficiency project finance and are also two of my greatest mentors as well, so it's a great honor to be on a webinar with both of them. I'll let them introduce themselves more fully before their part of the presentation.

But briefly, just to introduce myself, again, my name is Joe Indvik. I'm the finance lead on the Better Buildings Initiative, so I work with the financial allies in a variety of other organizations to help unlock the energy efficiency financing market. I'm also a clean energy finance entrepreneur, so I've started three companies that address various aspects of the clean energy financing market, so I have a little bit of private sector experience as well.

A quick overview of today. We really want to cover three things on this webinar, so first is I'll give about a five-minute summary of the state of the energy efficiency financing market and then I'll do a demo of the Better Buildings Financing Navigator, which is a tool that we are launching this week that I'm excited to show you all that helps private and public organizations find financing solutions for their energy efficiency projects. And then finally and most importantly, we'll hear some advice and perspective from Billy and Brenna who really have their heads in this stuff every day and are actively managing a number of energy efficiency financing deals, so we'll get the kind of on-the-ground perspective from them.

And just to remember through this webinar, the key takeaway we want you to have here is practical tools and insights to help you find funding that works for your organization, so we're going to try to stay away from the theoretical and keep this webinar focused on practical insights.

So first and foremost, let's talk a little bit about the state of the third-party efficiency financing market. So when I talk about financing, what I really mean here is using capital from a bank, or a lender, or some other financing provider to do energy efficiency projects in your own facilities and then to repay that financing through some mechanism over time. So what we're not talking about is internal strategies for using your own money to finance efficiency, so Brenna and Billy may speak on that a little bit. We're also not talking about bonds, securitization, or other types of capital-raising strategies, so we're focused today on, at least my section of the presentation is focused on *[interruption in audio, 0:03:55 – 0:04:06]* that there's a massive opportunity here.

This is a now somewhat famous number from a McKinsey study in 2009 that showed that there is a $520 billion investment opportunity in America's building stock today, so that's net present value positive energy efficiency projects that will look attractive to an investor that are available with today's technologies. And the other thing we learned from this report is that that opportunity is spread pretty evenly across the residential, commercial, and industrial space. So regardless of what sector you're in and what types of buildings you're operating, there's a very good chance that in your facility, unless they are already hyper-efficient facilities that have eaten up all the low and medium-hanging fruit, there are probably energy efficiency financing opportunities that are going to look attractive to at least one of the financiers that we discuss today.

The second trend to be aware of is accessibility of financing by project size. So if you're having trouble finding financing for efficiency projects in your facility, you're not in the minority. This is from a Joule Assets study back in 2013 that shows the availability of "easily accessible financing by project size." Now we can learn from this that No. 1, smaller projects tend to have a harder time finding financing than larger projects do. I think those two bold on the left have probably filled up since 2013 as more companies have entered the market trying to solve the small project financing problem, but I think it's safe to say that smaller projects do still tend to have a harder time finding financing than larger projects.

But the second takeaway here is that no matter how big your project is, the financing industry is not completely surveying all project opportunities currently, and I think a big driver of that is generally poor education among building owners and operators in terms of what types of financing is available in the market and how to access that financing, so this is what we spend most of our days here in the Finance Program's Better Building's Initiative thinking about and trying to solve.

And the third important trend to be aware of is that over the last couple of decades, there's been a dramatic proliferation in how many financing options are available to solve the energy efficiency financing problem. This is largely in response to the last slide, I think.

So I want to briefly walk you through this tree diagram which shows you the overall landscape of the different financing options and how they compare. So we have on the left there are traditional financing, so traditional refers to financing mechanisms that historically have been used for other purposes but are now being used for energy efficiency specifically. On the right side, we have specialized financing, which are financing vehicles that are specifically designed for energy efficiency.

So within traditional, we have various flavors of leases and loans, which I won't go into in too much detail but happy to discuss those in the Q&A, and then within specialized, we have on-bill financing, where the customer repays the financing on their utility bill. We have property assessed clean energy, where the customer repays via a property assessment on their property tax bill every year. And then we have what can generally be called savings-backed arrangements, so these are contracts, for example, with an

energy performance contract where an energy service company will come in, do a set of upgrades, and then manage those upgrades in a vertically integrated fashion. In that category, we also have energy services agreements, which is a structure in which the customer pays for the service of energy savings, pays the provider directly for the energy savings achieved, and that's sometimes also referred to as energy efficiency as a service.

So if your eyes glazed over a little bit for the last two minutes, you would not be alone. This is, again, one of the challenges in this market is I spend pretty much my whole days thinking about this stuff. Billy and Brenna spend a significant chunk of their days, but the average executive, and building owner, or other person who may be a consumer of financing probably doesn't have more than five percent of their time to spend thinking about this, and frankly, the complexity here in terms of the number of options available and how they compare can seem a little impenetrable, so in a nutshell, that's why we developed the Better Buildings Energy Efficiency Financing Navigator.

So the Navigator, as I said, is an online tool that helps private and public sector organizations find financing solutions for energy efficiency projects. We're launching the Navigator this week, so you all on this webinar are the first eyes to see the fully live and ready to go version of the Navigator, which *[interruption in audio, 0:08:32 – 0:08:41]* lets you answer a few basic *[interruption in audio, 0:08:43 – 0:08:53]* placed with an ally within a few minutes. So the Navigator will be free and publicly available on the Solutions Center that I'll link to everyone on the webinar when it does launch.

So with that, I'd love to give you all a quick demo of the Navigator. Give us a couple of seconds to get set up with the screen share here.

Okay, so this is the Better Buildings Energy Efficiency Financing Navigator, so this will be, again, live on the Solutions Center later this week and there's three paths you can follow through this tool. So if you're just getting started and want to generally explore financing options, you're not quite sure where to start, then clicking on Explore is a good choice for you. So the Explore page, which you can see here, gives you a basic 101 introduction to the efficiency finance world. We've reproduced the tree diagram that I showed everyone earlier, except here, each one of these little gray boxes is clickable and will send you to a fact sheet about that financing option specifically. I'll talk more about those fact sheets

in a second.

And then we also have an option to Browse Financing Options. So if you are interested in a particular aspect of financing and you want to compare and kind of slice and dice the different options and compare them to each other, this is the place to do that, so we have then initially grouped by traditional and specialized. Say you wanted to search by Contract Complexity, so you could filter here for Contract Complexity and you can see the options grouped into Low, Medium, or High. We can do the same thing for other parameters such as whether that financing option has a Guaranteed Savings component or not. So this is a way to slice and dice the universe and figure out which financing options you may want to look into more, and again, each one of these gray boxes here is clickable depending on what you'd like to read more about.

So let's say we've explored our financing options and have a little bit better idea of what the overall market looks like. The second path you can follow through the tool is to answer some very simple questions about a particular project that you have in mind and we will attempt to match you to financing options that might be a good fit for that project.

So I'll fill out these questions here as I talk, but we ask about the sector of your organization, so we'll say commercial and industrial. We ask about the estimated cost of the project, so we'll say $100,000.00, whether the building is owned or leased, and then we ask about some of your preferences here as well. Now you don't have to fill out all of these questions, only the one that you feel comfortable answering. Notice that we have a detailed tool tip for each of these questions, so not only are we collecting information that will help the tool match you to specific financing options, but we're also helping to educate you on the types of questions you should be asking when you're talking to a financing provider.

So let's say we want an off balance sheet financing solution. It's important that we have some guaranteed savings as part of the contract. I'm just gonna go through these quickly. We don't particularly care about depreciation. We do want to have project savings measured and verified as part of the contract. We'd like a longer contract term. We want to try to minimize contract complexity if at all possible, and we're not in any huge rush, but we'd like to close on this financing in the next three to nine months.

So with that set of preferences, we click Submit and I would liken

this to when you're shopping for software online and you have a basic premium and deluxe option and you often see a table laying out the features of each of those different packages, well, we're doing the same thing here except for financing options. So going down the vertical axis here, these are the preferences you just expressed in your question and then we're mapping those preferences to each of the financing options, particularly the top four that we think would be the best fit based on your responses.

So for example, we said we were in a commercial and industrial space, so an energy services agreement would be a good fit for a commercial and industrial. So if you mouse over the cell where that match occurred, you can see a little custom tool tip that will tell you why that match was made and teach you a little bit more about that relationship.

Some of the matches might come back as partial matches. So for example, for ESA, we said our project was $100,000.00. ESA's more typically serve projects in the $250,000.00-plus range but there are some providers that will go lower than that and do $100,000.00 projects, so we have that as a partial match. So our very simple algorithm matches what we think are the top four financing options, or less than four, depending on how strict you were with your preferences, just as a very basic initial introduction to where you might want to be looking for financing products. Once you've decided on a couple, from here, you can go on to read the individual fact sheets about each financing option.

So this is designed as sort of everything you need to know and nothing you don't fact sheet, so we have one of these for each of the financing options. At the top, we have a very brief summary. We have some bullets that lay out why this option might be a good fit for your organization. We have a standard diagram that lays out each of the players involved in this financing option and how they relate to each other. We have a detailed How it Works section that explains how a typical deal of this type is structured. In this case, for ESAs, we're covering an alternative approach to ESAs which is managed energy services agreements. We have an Advantages and Disadvantages section that lays out some of the common thinking around the pros and cons of each option. We have a State of the Market section which discusses how large the market is in terms of total amount of deals financed as well as what direction the market is heading in.

We have a Connect with Providers button, which I'll talk about in a second. We link to any Better Buildings implementation models or

other case studies that may be useful in framing your thinking around this financing option. We have a Learn More section that can link out to additional resources that if you do want to read more about this option. Then for the data nerds or those who just like to see everything in one place, we have an ESAs at a Glance section that lays out all the information about ESAs that we have in the Navigator in case you want to just download this and look at holistically.

So the final and I think most powerful path through the tool is using the Navigator to actually connect to its financing providers, so you click on the Connect with Providers button, we will take you to the Connect with Financial Allies section. So here, you can see a list of all the financial allies who provide the financing product in question, so you can see the list has already been filtered for energy services agreements.

So the quick brief, the financial allies are partners under the Better Buildings Challenge who have committed to deploying capital into energy efficiency projects, so these are financing companies that are actively serving the efficiency space and have committed to helping other Better Building partners and the market as a whole get more financing done. You can browse this list however you like and select one or more financial allies that you think might be interesting to connect with, and then if you like, you can read more about an individual ally.

So let's take Metrus Energy here, for example. We can read a bit more about Metrus, the products and services that Metrus provides, and then most importantly at the end, we have contact information. So the idea here is that within 10 to 15 minutes, or maybe less if you're fast, you've gotten to a phone number and an e-mail that you can call to start connecting with the financing provider directly, and when you do connect with them, you're gonna be armed with a better understanding of what you're looking for, hopefully. So overall, we hope this tool will grease the wheels on financing conversation and get more deals moving more quickly.

So I'm excited for your all's feedback on this. We have some contact information at the end, so please do e-mail me if you have feedback or would like to be involved as an advisor or reviewer, and with that, I am going to hand it over to Brenna. Give us one second, Brenna, to get your slides set up.

Brenna Walraven: Great. Thanks, Joe. I appreciate it. Let me just say thanks, Joe, and everyone at DOE for the opportunity to participate in today's

webinar. My name, again, is Brenna Walraven and I run a boutique consulting firm focused on helping organizations not only understand but kind of achieve the strategic value proposition of the business case for efficiency and sustainability, and my clients represent 300 million square feet or more of large and small organizations in all sectors of real estate, so office, industrial, retail, apartments, hotel, and development.

But my background is actually all in real estate operation, so I've actually, as Joe said, worked on all the things we'll be discussing today and hope to share some information and best practices that will be of help for all of you. Next slide, please.

So I thought it was really important to talk about market context. Obviously economies continue to grow, certainly slower growth than we've had in the past but with very, very historical low interest rates and at a Fed Funds rate close to zero, so really what that means is that owners can no longer rely on cap rate compression to drive value. They really have to more proactively manage assets and make strategic investments to support tenant retention, and occupancy NOI growth, and thus value creation. Next slide.

The problem is owners of real estate, the big four-letter word today is risk. They're used to taking risk around leasing, and managing, and maintaining real estate, but not around energy retrofits. Certainly the more sophisticated, well-capitalized owners are used to doing this. They not only have capital but they have internal expertise to manage retrofit process, but this is a small segment, less than 15 percent of the overall market, and so for most owners, really efficiency retrofits raise real concerns about not only risk and access to capital, but also not having the internal expertise to mitigate that risk.

So if we move to the next slide, I think it's also important to say that the risk of doing nothing is also very real. Ninety-five percent of the buildings in the US and globally today exist already, are not in construction, which means that they were designed for less densely occupied than what we're increasingly seeing, so there's more people per square foot, more computers per square foot, more densely occupied space, which means the infrastructure buildings are really increasingly not set up to handle and support these tenant demands, which means, again, buildings are gonna need to make investments in retrofits which kind of speaks to Joe's slide about the opportunities around pent up demand for increasing investment. Next slide.

So if you don't have expertise, you may say, "Well, how do I deal with all this?" Obviously the bulk of this presentation is on the financing Navigator, which is gonna be a huge help, but I also just wanted to mention a couple of others to keep in mind. There are actually many agencies and utilities that have retrofit resources including rebate incentives, so it's certainly worth the time to invest. L.A. Better Buildings Challenge. I'll talk a little more about them. NEEA and NYSERDA, they're state energy offices. Even the BOMA, which is the Building Owners Managers Association International, has both education as well as a BOMA energy performance contractor BEPC, pronounced like Pepsi, the soda, but with a B as in boy, has a toolkit that I'll talk a little bit more about here in a minute, but it's also important to understand that, as Joe talked about in some of the options out there, if you don't have internal expertise, one option to think about is working with an energy service company that not only can put together the project but actually can provide management oversight and completion guarantees, and then there are also consultants that can come in and oversee that process as well. Next slide.

I thought it was important just to talk a little bit just as one example about the Los Angeles Better Buildings Challenge, which is obviously part of the DOE Better Buildings Challenge program. It's a partnership between the city of Los Angeles and multiple partners, including the local utilities in Los Angeles, so the Los Angeles Department of Water Power and So. Cal. Gas. Why is that important? 'Cause again, they can provide technical expertise, access to retrofit rebates, and other incentives, and in fact, LABBC developed their own what they call AMP program, which is the Accelerated Modernization Platform, to help companies walk through a simplified best practice approach to retrofits. Again, they provide additional technical expertise, access to approved provider partners that align with the AMP program, and they've also partnered with BOMA on the BEPC program. So it's just an example of where there's resources out there that you may not have been aware of that could be very, very helpful. Next slide.

And you may be saying who uses or who engages with this program? There's actually 60 million square feet of existing buildings that have either signed up or are already partnering with LABBC. I think what's important about this list is really just to understand that there are both very small and very large companies actively engaging. I mean Kilroy, CBRE, Transwestern, these are very large, sophisticated companies, and they're still finding value out of these partnerships. So it's just something to be aware of and

I just wanted to mention. Next slide.

So why would owners consider third-party financing? The short answer to that is because capital is finite. There's just not an unlimited amount of capital to do all the projects that are really worthy of consideration, and honestly, if a retrofit wasn't underwritten or originally planned for in the acquisition, then often we're just finding that owners don't want to go back to investment partners for capital 'cause it sends this message, "Hey, we missed something. We didn't figure out that we needed to make an infrastructure investment," and now we're coming back, and they just don't want to send that message.

There's also other reasons, which there's, again, other higher priority needs for capital, so for example, tenant improvement dollars associated with new leasing activity, or maybe there's a common area renovation to help make the building look more modern. But I think these are exactly the scenarios where third-party financing and capital could be a great solution. Next slide.

So the key here is how do owners consider using third-party financing. Often, they just look to traditional lending sources and that's not to say that those are unuseful or you shouldn't consider those, especially if you're going through a major refinancing, but it's also helpful, as we talked about here a little bit with the financing navigator, that there's a lot of options that weren't even available a few years ago. I think what's important to make the point here is make sure that we're asking the questions that are really ultimately the most important to owners. I find often owners really just want to cut, "Well, what's the interest rate? What's the term of the loan? My lender won't approve additional debt." So what we need to do is focus on broader questions and this is exactly what the DOE Efficiency Navigator can help you do. Next slide, please.

So specifically, and we're certainly not in the time we have today going through all these, but I thought it was important to, again, reinforce that Efficiency Navigator can help you understand how many new available financing options are out there that didn't exist even a couple of years ago, like PACE, for example, which fundamentally is on the rise. It's now been enabled in Massachusetts, in Texas, in Wisconsin, and it's on the rise, so that may be a great solution that didn't even exist or know was available but it's important to understand what those options are.

And as Joe said, we're not gonna go into the details of internal

funding sources, but there are ways to internally fund for retrofits like setting up a capital reserve in your operating budget where you take a small monthly amount and fund it into a reserve account and once you build up enough to then use that money for a retrofit, or you can set up internal green funds that you can have third party companies manage for it, but also reinforce that if you can identify retrofit during an acquisition process, it's a lot easier to get those projects done. Next slide, please.

So this is where it's really important, coming back to those questions. If you look at this list of questions, nowhere in here do I say, "What's the interest rate?" or "What's the term?" I think what ultimately is often more important than interest rate is things like personal guaranty. Can I apply it on sale of the building or can I pay it off? Do I own the equipment?

And let's go to the next slide and I'll give you a couple of examples, and this is what the Navigator is gonna do but I just thought it was important to reinforce here, which is nonrecourse and having no personal guaranty, the ability to transfer a sale and pass through to tenants as an operating cost and either be a net savings or neutral, then you really should consider, and think about, and understand whether PACE can work for you or whether an energy service agreement is right for you. Next slide, please.

And if your criteria is, "Hey, I don't want to have to go back to my existing lender and I want it to be balance sheet neutral in addition to being able to passing it back on an expense neutral basis as an operating cost." Hey, then maybe an energy service agreement or an energy performance contract is a great option or even on utility bill financing. So the point here is it's thinking about, again, not just interest rate and term but all the other factors, and that's what the navigator is gonna be able to easily and quickly walk you through, so you don't have to memorize what those questions should be but you can easily walk through them. Next slide.

So again, ask the questions to really understand what's important to that ownership and then you can try to match up what might be the right solution and then when you, again, as Joe outlined on the Navigator, you can actually identify the kinds of providers that provide the kind of financing that fits those questions and then be able to match those up. So it's a great opportunity to simplify that process and really develop some expertise without spending a lot of time. As he said, 10, 15 minutes, you could get to those types of options and know where you might want to go. Next slide.

So again, the key important concept to understand is the Efficiency Navigator can help with alignment of what's important for your ownership or for your key decision-makers, and again, often those important factors are not interest rate, right? Nothing to do with interest rate if it meets those other bigger and more important criteria and then you're going to be able to get to a solution that might be feasible, and I've seen this happen in real lives, so I know it works. So next slide.

So I wanted to talk a little bit about, again, another resource and a risk mitigator, which is the BOMA Energy Performance Contract model or BEPC. What is it? It's an industry vetted proven process to implement successful performance-driven retrofits. It actually was developed originally under the Empire State Building project, which you see the picture there. We actually took best practices out of that process to develop the toolkit. It includes an actual model contract that is in a Word format that you can edit. It also has an exhibit version that was launched last year so that you can use your standard contract model and then attach as an exhibit the best practices that BEPC provide. But it also has our PRQs checklist and all parts of additional resources, and here's the key, it's free, and you can get it BOMA.org/BEPC and I think it's a great resource available to you. Next slide.

I thought it would also just be real helpful to quickly touch on further talking about BEPC and how performance contracting works just briefly. The energy service company will, in this example, pay for the retrofit upfront and then you will pay it back out of that energy savings over time, generally creating a net savings which is that yellow bar at the top, from Day 1, and then as soon as the contract is paid off, you've paid for that retrofit over time, the savings all flows to you or your building. So it's a great model and it's something that I know has been very well used in the public sector and I think will increasingly be an opportunity in the private sector as people get more familiar and more comfortable including through using tools like the financing Navigator. Next slide.

So coming down the home stretch here is why should you care about some of the stuff is increasingly, retrofitting buildings is the way to really drive value creation, and being somebody who cares about value creation, you want to look for ways to do that, that drives the most value, especially when capital and expertise might be limited. You can also include things like greening of the buildings and not just pure efficiency. You can also include an

Energy Star or LEED certification, and again, make that building more competitive. Next slide, please.

And so, again, in closing on BEPC, which adopts all these best practices, it's really BEPC helps you focus on the owner's investment criteria and core goals to determine what the project scope should look like and then you can use that again through the toolkit to get to the right contractor who then will provide a bid or proposal that is creative, and holistic, and meets that owner investment criteria, but you started out with the right questions and investment criteria from the beginning. The other key thing that BEPC promotes is third-party standards as well as transparency, so you should be clear on what the process is, and again, this is what the Navigator helps you understand better. And then a final point on BEPC is that it's financing agnostic, meaning it can work with many of the solutions we've been talking about today, and again, is free toolkit and resource.

With that, I will wrap and turn it over to my colleague, Billy.

Billy Grayson: Awesome. Thanks Brenna, and that was amazing. It's really hard to follow Brenna and Joe. Joe, I love the tool that you guys developed. Brenna, I encourage everybody to check out that list of key questions that Brenna had before asking about an interest rate and an ROI because I think those are the sort of questions, and I'll get into this a little bit with my example and case study, that really surprise you as you're going through this process of trying to find the right financing.

So I guess if it's okay with everybody, I'll just jump in. My name is Billy Grayson. I'm principal at Bent Branch Strategies. We're also a boutique consulting firm really focused on getting the most savings and revenue generation out of a company utility spend and with a focus on energy water waste and greenhouse gas emissions. It's amazing when you look at a large, decentralized portfolio in real estate how many savings opportunities there are and I think that the first step is always looking for those no-cost opportunities, but once you've checked all that fruit on the ground and you've started going after those high ROI projects you can pay for yourself out of pocket change, you then need to get creative with financing strategy.

So I'm gonna spend a little bit of time talking about two examples from my experience working with large predominantly industrial portfolios about how and when to evaluate whether to use your own capital for an energy efficiency retrofit program or to go out

and identify different sources to make a more cost effective and efficient program. So next slide.

Oh, and I forgot. I thanked Joe and Brenna. They did an amazing job, but I also want to thank JDM and the Better Buildings program. I've been shamelessly stealing the free information that Better Buildings has been putting out for several years and it's some amazing work, so even for ten minutes to be able to give back a little bit to this program, so I'd encourage people to check out all the archives and all the different tools, including this financing tool.

So a little bit on Liberty, a $9 billion RE, 105 million square feet, a strong energy management culture. Liberty is one of the first REs to join the Energy Star Partner program and it's earned Energy Star Partner of the Year for I think six years in a row, really focused on energy efficient operations, and office building, and also a strong commitment to green building certification, but as Liberty was pivoting from being a predominantly office RE to more of an industrial RE through acquisition and new construction, the company was trying to figure out where there were opportunities to apply energy efficiency and sustainability which they had done so well in office to their industrial portfolio.

After we analyzed the industrial portfolio, we found out a couple of things. One was to build 350 buildings where Liberty was paying an energy oil water bill, and while these bills were not the biggest bills in the building, many of them only a couple of thousand dollars a year, it added up to a utility spend of over $4 million a year, and at the time, most of that was focused on a couple of bills. It was outdoor landscaping, it was some fire pumps, and then it was the outdoor lighting. That was by far the largest bill, by far the most common utility expense that Liberty was paying and then passing through to the tenant.

At the time of this program, only ten percent of that outdoor lighting was LED. Most of it was metal halide and Liberty had gone through and announced it's LED four years ago, but since then, the price of LEDs had dropped over 50 percent. Liberty, also traditionally an industrial, hadn't pursued a national stack providing, gone after national pricing, or done any national RSP for lighting. Most of the bids that were coming in were coming from local dollars and if there was a financing opportunity, it was usually either a local bank or through the installer's source of capital.

One other great thing about the industrial portfolio is that Liberty had pursued a green lease working with Institute for Market Transformation and other leaders, really put language in their leases to get over the split incentive associated with the challenge of owners paying for energy efficiency upgrades that they weren't able to recoup from the tenant. So there was an opportunity within those leases to have a number of different ways to pass through the cost to the tenants who were receiving the benefit from the energy efficiency upgrade. Next slide.

So evaluating the opportunity, we did many of the things that the new energy efficiency tool will allow you to do, and we also asked a lot of the questions that Brenna shared as well. The different strategies that we came up with were the opportunity to pay for the upgrade upfront and charge it back to the tenant, to develop some sophisticated marketing and convince the tenants to pay for these upgrades while they were in the middle of their lease, to use it as a bargaining tool in lease extension and renewals, to look at third-party financing. We'd identified three major sources of capital which offered us a fairly low interest rate. Ask those who this is their bread and butter and they have the standard contracts and they're used to doing a lot of large portfolio projects, as well as utility companies, mainly because they made the transaction easy by offering in many regions on bill financing for energy efficiency retrofit, which seemed like a really streamlined way to tackle this.

We also looked at two innovative strategies that have really just come on the scene for the last couple of years. One is lighting as a service where you sign an agreement to allow a third party to come in and sign contracts with your tenants to lease lighting from them and for the privilege of giving them access to your building. They can often, as part of their contract, pay you a small rent, or pay you a finder's fee, or interest income which is a really exciting thing for a RE that is trying to figure out alternative revenue streams out of the same building, so even a nickel or ten cents a square foot, that can be pretty compelling when you apply market cap to that and look at that contract over several years.

We also looked at PACE, which is a new clean energy and energy efficiency financing that's offered in a number of states and municipalities now which gives you the opportunity to take a capital expense and pay for it on your property taxes through an additional assessment that then allows you to pass that cost into the property taxes. For a building owner, that can be great because often your leases are net of taxes, so that automatically goes to the tenant. It also is great if you're thinking about selling a building

before you've achieved the payback on an investment because then the investment carries with the building.

At the same time, obviously there are challenges with that. One is whether this creates an encumbrance on the sale. It shouldn't because the new buyer is getting the benefit associated with that investment, but there is a challenge there, and there's also just the question of whether or not when this building becomes vacant and goes out to the marketplace, whether a tenant's gonna be sophisticated enough to recognize that there are higher property taxes on one building are more than offset by the lower operating expenses associated with the energy cost.

So looking at this scenario, four years ago, I had been in a similar situation where I was working with a 400 building portfolio where they had no money. There was no capital to spend no matter how good the payback. We pursued two strategies. The first one was we tried to talk landlords into it because the landlords are getting an approved building and we were willing to pay them back over time in our operating expenses. We felt the landlord should jump at the chance to pay for an energy efficiency upgrade. Unfortunately, it was harder than I thought to convince a landlord to pay for a $30,000.00 or $40,000.00 lighting upgrade, and even when we agreed to pay for part of the project with the remaining term of our lease, we didn't have that many takers.

So we went out and financed the project through on bill utility finance programs and it was great. We were able to get lighting projects done with a two or three-year payback and get them paid for on our utility bills over the course of five years, so we were getting a net positive savings. We were getting better lighting and it paid off commensurate with our lease.

But when I dug into financing these deals, I figured out that the utility companies were making a 13 to 18 percent annual effective interest rate on these projects, so even though it was cash positive for us, they were making a killing and there's a reason why there's a growing billion-dollar industry to finance energy efficiency improvement. It really is a great business. I thought about trying to figure out a way to put this on my credit card but then I looked at what my credit limit was and I wasn't able to finance it that way, but with interest rates and effective interest rates like that, it's just really compelling to figure out a way to use your own capital if you have it. And some I'm gonna go to the next slide.

That's essentially what we did at Liberty. We paid for these

projects upfront and we were able to charge back the cost of the project with interest to the tenant. One of the biggest challenges that I had was while we had a low-cost capital, Liberty is very, very effective at deploying capital in ways that add value, so there's a very high hurdle rate for leveraging internal capital to pay for a project. Thankfully, these efficiency projects, these LED upgrades, had such a great effective interest rate that we were able to beat Liberty's internal hurdle, which is actually a very challenging thing to do, with 80 percent of the projects that we bid out.

We prioritized these projects based on the payback incentive focused on the buildings that were soon to be empty. The way we did it was we set it up as a long-term amortization schedule that was cash positive from Day 1, so if we had a tenant in the building and they got an LED upgrade. Their bills went down five percent immediately and once the project was paid off with interest, they captured all of the savings through the end of their lease.

But we found it was even more compelling with our internal accounting and many of the folks that had vacant buildings were the first ones to take advantage of this new amortization schedule, and the reason was all of the cost associated with keeping outdoor lights on while a building was vacant go to unrecoverables, and those unrecoverables hit a budget of property region much harder than any cost that they can pass to the tenant. So we found that the first buildings that were being upgraded were the ones that were vacant.

The other positive consequence we saw is once these buildings got upgraded, you had a very visible difference between that building and the building next door, and in industrial, they say that you don't have to always have the best building. You just have to beat the building next door, because location is everything. So the new LED lights almost acted as an extra billboard to advertise that our buildings were operating with the newest technology.

So the return on this project? With a $3.5 million upfront investment, we were able to generate $1.5 million annual energy cost savings, $1 million in interest income over three years, and $1.5 million in lifetime maintenance savings with no upfront cost for tenant and as cash positive from Day 1. Next slide.

So we got a good return but we also wanted to figure out every way that we could sweeten the deal for us and the tenant, and just part of that, we not only took advantage of the utility rebates in the

regions where we were doing these projects, we also had a rebate audit done by a company called Real Win Win. They identified a number of rebates that we wouldn't even have thought of going after, including a PJM rebate around permanent demand reduction, the EPACT tax credit's another update, as well as accelerated depreciation opportunities to get things off your balance sheet that effectively acted as a rebate when you looked at the total cost of the project. So I really encourage everybody on this call to look at both the DSIRE website, which has a free listing of energy efficiency and clean energy incentives, as well companies like Real Win Win that will do that sort of an audit for you.

One more thing on this contract. It's important when you have a number of buildings, you negotiate a national contract with installers and manufacturers. We found that the pricing we got on a national contract was 35 to 50 percent better than what we were having bid by local installers, and we also used these outdoor projects as an opportunity to engage the tenant. In industrial real estate, a lot of times once a year, you're going to visit the tenant to pick up your check and to inspect the fire system, and yearly just built a different type of relationship with our tenants where they saw us trying to help them reduce their total cost of leasing, which opened the door to conversations about whether we could upgrade their indoor lighting, their HVAC, their heaters, and use a similar sort of financing option, 'cause unlike at Liberty, our tenants were more cash strapped than we were and they really were looking for that third-party financing opportunity . Next slide.

So for LEDs, with the low cost of capital and plenty of capital on hand, self-financing was a great strategy, but for a lot of other projects that we wanted to pursue, it really didn't make sense, and so Liberty is in the process of developing pilot projects with lighting as a service to try and generate some additional income out of the building that we are renting to our tenants, looking at PACE for a number of investments with a long-term ROI where either Liberty doesn't own the asset like a HVAC upgrade, or where Liberty needs some support in being able to take advantage of a tax credit, because as a RE, they don't have the same tax appetite as most companies, so PACE really provided that opportunity to, from a long-term cash flow standpoint, make something cash positive even though it had a very long ROI.

And we also looked at those bigger-ticket items, the HVACs, the cooling towers, the onsite renewable energy, as that opportunity to talk to a tenant about lease extensions and renewables, because in a three to five-year lease, it's really hard to make long-term financing

work, so working with your tenants and getting a five to ten-year lease can often be a way around some of the challenges associated with the projects that you really need to finance. Next slide.

So some takeaways, and then guys, you're gonna have to click through these, so just bang them out for me, if you don't mind. Every building and every portfolio has a great ROI opportunity. You've just gotta know where to look. Any of these opportunities with financing can turn into something that's cash positive long term, so if you can't handle the upfront cost, there is almost always a way to finance something with decent payback over the lifetime of the item.

As other folks mentioned, you should choose a financing strategy based on your cost of capital, the hold strategy of the building, and the lease provisions that you have with your tenant. It's always good to leverage your size to figure out a way to get cost down for both materials and labor, and we found that was almost as important as figuring out our financing strategy for this project. Always gotta look for those rebates. There's a surprising number that you can often take into conjunction with each other, and after going after that low-hanging fruit, whether you do it with a short-term financing option or your own capital, there are some really amazing long-term financing strategies that exist now through the utility companies, ESCOs, as a service, … as a service companies, and PACE financing. Those are great ways to tackle long-term ROI. And remember, it would be a great opportunity if you are a landlord to talk with the tenant about a lease extension to take advantage of some of these hire ROI long-term opportunities.

And with that, I think turn it back to our moderators to field some questions.

Joe Indvik: Awesome. Thank you, Billy. Great presentations from both, really appreciate the thoughts. We've got about eight minutes left here. We might go a little bit over the time, so we have about 10 or 15 minutes for questions. Before we do that, I want to talk a little bit about additional resources, so a few of the things we talked about today, the links are here if you want to access them. So we have the Database of State Incentives for Renewables and Efficiency that Billy mentioned, and the BEPC, which Brenna mentioned.

I also want to call out a report. It's not listed here but will be listed on the version we post online, a recent report from Lawrence Berkeley National Labs called *Current Practices in Efficiency Financing*. We relied heavily on that report in developing the

Navigator and that's a great source of more information if you want to take a deep dive into each of these financing options and how they work.

So with that, we'll do some Q&A, so I'll let Billy take a couple of seconds to look over the questions that he has and I'll do one for me first and then do one for Brenna.

One question that we got about the financial allies at the end of the Navigator presentation is how many financial allies do we have? What portion of the market do they represent and how can you become a financial ally if you have a financing company that hasn't yet joined the program?

So we've got about 30 allies that represent an interesting cross-section of the market, including some big banks like Bank of America and Citi, some kind of medium-sized financiers like Metrus Energy and Flywheel, and some startups like Spark Fund and others, so a really interesting mix that collectively all of the allies have deployed about $5.4 billion with a B in energy efficiency finance since 2012. So I don't think we can say they represent the majority of the market but they represent a pretty significant chunk of it and I think a representative cross-section.

In terms of how to become a financial ally, we are always interested in having more conversations and bringing more allies onto the program, so shoot me an e-mail. You'll see my contact information at the end of the presentation. This is Joe speaking, by the way, and I'd be happy to talk to you about that because we're always looking to have new folks join the program.

Let's see, a question here for Brenna. One of our participants, Brenna, asked if a customer has a number of lease options specifically or financing options in general, how would they go about determining which of those offers is the best? Should they look at interest rate and term or what are some of the factors they should look at to bid a couple of different offers against each other?

Brenna Walraven: Joe, it's a great question. Well, first of all, even though I harped on don't focus on interest rate and term, I think my point about that is I really just wanted to make sure you didn't use it as the first thing that you looked at or the only thing that you looked at, but certainly interest rate and term can help you to determine between a couple of options that are similar and maybe hit all of those bigger other questions that are likely more important to your

decision-makers. I just wanted to make sure you weren't using that as your only or your first question but you were expanding that.

It's also other contractual terms like if I want to sell my asset and terminate this agreement, can I do that? If so, what are my penalties, so there's some other things like that that might be just as important and speak to the cost of the capital that you're using and one to consider. I think it's ultimately going to come down to what are the things that are most important to the decision-makers, what is the type of project, and again, that's where the Efficiency Navigator can really help you sort through that.

Joe Indvik: Great, and Billy, do you have any thoughts on that question or should we move on to the next one?

Billy Grayson: Always look at your interest rate and look at your internal rate of return and that should help you decide whether to self-finance or go look to third parties. But Brenna's right. There are some amazing hidden cost associated with some of these contracts including just the cost of having to execute the contracts, so it's always good to look at a broader range of things besides just the interest rate.

Joe Indvik: Okay, great, and Billy, we have a couple of questions about your process for engaging Real Win Win, how that worked, how much it cost, and generally how long that process takes and how it works.

Billy Grayson: Real Win Win costs too much. I hope Derek is not on this call and hearing that. They take a big cut of the opportunities that they find, but the reason that they're so amazing is that they're finding opportunities that we did not pursue for rebate. So when we did a national RFP, we built into the contract that our lighting providers had to give us the cost net of the utility rebate and it was on them to go fill out the application and make sure that the utility rebates got processed, which is great because that made that process a lot easier and ensured that they had an incentive to go and get those done, but we didn't know about and didn't have the time to chase things like EPACT or this PJM permanent demand reduction incentive on a major scale, so Real Win Win, as part of their audit of our construction projects, which was another surprising place to get rebates, also spotted all of these opportunities from the retrofit program we'd already launched, and even though they took a big cut, they also saved us a lot of money, so it was worth it.

Joe Indvik: Great. Thanks, Billy. Another question for myself, Joe, here, someone asked how contractors, vendors, and brokers could use the financing Navigator. So I focused most of what I talked about on uses for the tool among building owners and operators, but we also designed the tool with contractors in mind, specifically contractors and vendors who were selling efficiency products and services into the market. Oftentimes, they serve as the liaison between the customer and the financing party, so we designed the tool in a way that if you, for example, have customer bids going out and want to package information about financing along with it, the Navigator can provide some free publicly available information to help you talk more articulately with your customers about financing options, and you can just send them the navigator link and have them do a little bit of their own exploring. So certainly the target audience here goes beyond just building owners themselves. We can also help vendors.

This could go either to Brenna, or Billy, or both. We were talking a lot about retrofits for existing buildings. I'd love to hear more about how you think about financing for efficiency improvements in new construction specifically.

Brenna Walraven: Go ahead, Billy.

Billy Grayson: Well, we found as part of our lighting audit that we were actually using utility incentive programs to avoid the cost of installing outdoor lighting on some of our buildings, but again, I looked at the effective interest rate of some of these projects and they're in the 13 to 18 percent range. There's a reason that you would take advantage of these projects. It reduces the development cost and the cost that you deliver a building, and if you can then charge the cost of something that could have been a capex as an opex back to the tenant, it reduces your total cost of ownership, so it's actually a really smart strategy that we were pursuing in this region. We're just getting a lost interest rate.

So we then started looking at these lighting as a service companies that had an effective interest rate of 6.5 to 9 percent as an alternative to going with those utility projects. You still avoid that upfront development cost. I think in most cases, it was $50,000.00 to $80,000.00 less than the developments, and then you were also able to take in free maintenance for five years on these five-year contracts with a much lower interest rate. So companies like Spark Fund, and GE Current, and others who offer this lighting as a service, I would recommend anybody looking at some of these utility programs to look at those as an alternative with a better

effective interest rate.

The flip side is that the utilities make it incredibly easy to sign the contracts and to pay them back for these contracts, whereas when you're working with a third party, it's always a little bit more complicated and a little more paperwork.

Brenna Walraven: The only thing I would add is that you absolutely can use renewables in the solution as well. I think it's just a matter of what's the use for the building, what the owner's objectives are, what you think the market is for renewable energy, and where that can fit. And that takes more than the one minute we probably have left on this call to get into, but again, I would echo what Billy's comments are, that there are really good options. Strategically, it makes sense to explore those.

Joe Indvik: All right. Thank you, both. We're gonna wrap it up there as far as questions go.

A couple of quick updates at the end here. We hope you'll plan to attend the next Better Buildings webinar on January 10, 2017, not 2016, called Efficiency Treasure Chest: How Cities, Manufacturers, and Retailers are Unlocking Energy Savings in Warehouses and Distribution Centers. That's part of this webinar series. And then also, don't forget to save the date for the upcoming Better Buildings Summit, which is gonna be on May 15th through the 17th, and registration for the Summit will open in January, but please do mark your calendars now.

And with that, I would like to thank our panelists very much for taking the time today. I really enjoyed both of your presentations, Brenna and Billy. Feel free to contact us directly with any questions you have or any questions we didn't get to during the Q&A. If you'd like to learn more about the Better Buildings Challenge or the Better Buildings Alliance, please do check out the website. There's lots of great information on there and on the Solutions Center, and I would encourage you to follow the Better Buildings Initiative on Twitter for all the latest. And once again, you will receive an e-mail notice when the archive of this session is available online.

Thank you all very much.

Brenna Walraven: Excellent. Thanks, guys.

Billy Grayson: Thanks, everybody.

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