

Recording: The broadcast is now starting. All attendees are in listen-only mode.

Eli Levine: Welcome, everyone. We're just going to give everyone a few more minutes to arrive, and then we'll get started. *[Silence from 0:00:14 to 0:01:18]* I'll give everyone just one more minute and then we'll get started. Thanks, everyone. *[Silence from 0:01:22 to 0:02:02]*

All right. Well, thank you. Let's move to the title slide here. Thank you, everyone. My name is Eli Levine, and welcome to the relaunch of Better Plants Online Learning Series. In this series we are profiling the best practices of Better Plants partners going over some basic fundamental resources to help folks to improve their energy performance and diving deep into topics you told us you cared about. We hope you'll join us on Thursday afternoons for the remainder of the summer and into the fall as we continue this great series.

We're particularly excited for today's, which is Webinar #7, which is Energy Treasure Hunts with our Friends and Colleagues at the Environmental Protection Agency. So, with that, let's move to the next slide. That's me. Next slide. So, as you can see this is just the beginning of the relaunch of the online learning series. You'll see this is number seven. If you're interested in any of the previous ones, and we had some great ones earlier, please visit our website, and we'll show the link to where you can find our Online Learning Series later. And you can watch any of these that have been recorded.

So, that's probably also a helpful reminder for me to let everyone know that we're recording this webinar for the Online Learning Series. We look forward to taking all of your questions and sharing them with any partners who aren't able to join us at the time you would want to be able to watch later. So, next slide.

So, one of the things that we're trying to do here to build off of the success we had at the virtual Better Building Summit is to allow a little bit more dynamic participation. So, we're going to have a couple of questions to gauge where you all are coming from and just get a better sense of what's going on in your plants. This should also be the way that you can submit questions. We're excited to announce today we're using an interactive platform, called Slido, for Q&A. Please go to www.slido.com using your mobile device or using an internet window. And the code for today is #DOE. If you'd like to ask our panelists any questions, please submit them any time throughout the questions.

One of the neat things with the Slido app is that if you like somebody else's question and would like to emphasize that you'd like to see this one answered, there's a thumbs up option for questions you like. Which will result in the most popular questions moving up to the top of the queue. We're going to do a question right now, just a basic opening question. I'll give everyone a few moments to go to Slido. So, www.slido.com, #DOE.

And the first question is just a simple yes or no question. Have you hosted a treasure hunt before? So, I will be doing this along you guys. Oh, there we go. Looks like no is the leader right now over yes with 17 responses in, 18 in. Let's keep going and see where we can go as responses come in, 21, 24 responses, and yes is making a comeback. I'll give it until we have at least 35, and we'll see where we end up. They're coming in, we're edging about half and half here, 54-46. I'll note that this is just the real-time votes. We haven't counted any of the mail-in ballots yet. Just kidding. So, 55-45, a couple more votes to come in, and then we'll move to the next slide. Holding tight at 55-45, any other folks want to chime in with their responses, 32 with no gaining of both.

That's interesting to me, and that sort of reinforces the importance of having this webinar today. And I think that for all of the nos and even all of the yeses I think you'll really get a lot out of it. 'Cause we're pretty excited. So, I guess with that, let's move back to the agenda slide.

Great. So, the agenda for today, we're going to spend a little time going through – you're going to spend a little time going through what treasure hunts are, how folks can take advantage of treasure hunts, and the resource that exist through the Better Plants Program and the Department of Energy to help you with your treasure hunts. Then we'll turn this over to our friends and colleagues at EPA to hear about the treasure hunt resources at ENERGY STAR as well as their exciting campaign that we very much want you all to participate in.

And then we're going to turn this over to one of our partners. Tyson's Foods has been a partner with the program for a little while now. And they recently had some great success holding a – we're all going through the pandemic and the aftermath of trying to figure out how we can move forward and continue to drive deep energy savings. And Tyson's Food led by holding a virtual treasure hunt. It was pretty cool to hear their story, and I'm excited to share what they did and how they did it, and hopefully that can provide

some valuable peer-to-peer learning for you guys as well. We'll have a question or two at the end, and then turn it over to all of your questions. So, next slide.

So, today's presenters – we tried to get Alex to change his name to Walt just for continuity. But, two Walts is sufficient for this. Walt Brockway will lead off. He works as part of Oak Ridge National Lab. Walt Tunnessen from the US Environmental Protection Agency. And Alex Floyd from Tyson Foods.

So, this is Walt, and we're just so thrilled Walt is a part of the Better Plants Program. Walt came to us after spending over 20 years working at Alcoa. He rose the position of the global manager for energy efficiency, and in his retirement it feels like he's working harder than ever for us and all of the other work that he's doing, which brings a wealth of expertise from years of experience in the plant. He feels like he's seen everything. I'm really excited to turn this over to Walt. So, Walt, with that, I will allow you to share. Feel free – that was my best attempt at an introduction. Feel free to add anything that I may have missed that's relevant. With that, I will turn this over to you for your presentation. Thanks so much.

Walt Brockway: Thanks, Eli. I'm actually 32 years at Alcoa, so a few more than 20. So, what I wanted to –

Eli Levine: [*Crosstalk*]

Walt Brockway: – cover was – thanks. I want to cover a little bit about what is a treasure hunt, and many of you may know that already. And then I will go through some of what I see as some of the key components of putting together a treasure hunt, playing for a treasure hunt, and actually apply it to most any type of assessment. That's – could I get the next slide, please?

Okay. So, briefly, and feel free to ask questions to put them onto the question format. A treasure hunt in DOE's perspective, and I've used this with others in my days at Alcoa as well. It's a three-day event now, sometimes it's two days, sometimes it's two and a half, sometimes it's four. But, about a three-day process. The idea with the Department of Energy is we call it a treasure hunt exchange. The exchange being that in many cases, not all, there is an exchange where Plant A does a treasure hunt and invites other plants to attend, and then they all go to Plant B and do a treasure hunt there. Or one company invites another, and they attend treasure hunts at each other's facilities.

The best example of that is we did one a couple of years back now with Toyota and Nissan. So, Toyota came to Nissan in Smyrna, Tennessee, helped them with a treasure hunt. And then a few weeks later Nissan went to Toyota in Jackson, Mississippi and did a treasure hunt there. Very interesting wide-open exchange of ideas and I really think enhancement to the process by doing the exchange. That said, not everyone has an exchange. At times, we just do a single treasure hunt with particular locations.

So, some of the elements that we think we bring to an exchange are profiling energy use for energy-using equipment. I will talk about that, and I think Alex will cover quite a bit of that. Data collection, how do we collect data? How do we measure data? Some energy calculators and we'll talk about those very briefly and real diagnostic equipment. So, real test equipment. Next slide, please.

So, the advantages of a treasure hunt exchange, and some might say an advantage over doing just a straight up energy assessment is – one thing is it's training and an assessment or treasure hunt. So, we really want to deal – we really want to train companies how to do treasure hunts on their own. We have a number of examples of companies that had done that and taken off and done great with it. We can share that or ask the other folks to share that.

It doesn't require sophisticated technical analysis. This isn't bringing in high-level consultants. This is about what we can do by ourselves with people at the plant. Calculations are pretty simple. We've got some really nice calculators that can be used. It can be applied by anyone, and I think probably the biggest piece of the treasure hunts are that they're performed by the employees at the facility or at neighboring facilities. It's not performed by the consultants. It's performed by the people that work there that know how the plant operates.

When we get done our aim is to have at least one employee able to perform a treasure hunt at their facility, at their company as we move forward. Typically three days, sometimes it's a little less. Sometimes it's a little more. We do place a value on opportunities, both in energy units and in dollars. That seems to be very important for management. So, we do that. And the opportunities are solicited from many disciplines. So, I always emphasize, don't just bring maintenance and engineering folks, bring in production people, bring in people from other disciplines, a new set of eyes, a new set of ideas. And inevitably that works out to be a good call. Next slide, please.

Okay. So, real quickly, some key components. As I said, they don't always apply just to energy treasure hunts or energy management. It probably could apply in many places. To me those are management communications, organizing and executing. Next slide.

So, on a management side, I very often trumpet sponsorship, sponsorship, sponsorship. Sponsorship at the corporate level, at the facility level, at the department level. They're all very important. Sponsorship brings lots of things, but what it brings is enabling employee participation. If employees know that the plant manager, the department manager, the CEO, the CFO really encouraged this, they're much more likely to get involved and own the process. And encourage ideas and exchanges, again, management being involved really helps to encourage folks to get out and find opportunities.

And we really like management to be present for a close out or daily summary or even just to say hello in the morning. I say this, and sometimes it sounds silly, but whatever highest level of management we have available, if they just stick their head in a room in a morning say, "Hey, thanks for coming, go find good things," it makes a difference. It also makes a big difference to have management at a close out session. My words are always, "Bring the highest level of management you can find and as many as want to come."

There's nothing worse than spending three days knowing a treasure hunt, putting together a presentation only to find out we're giving the presentation to each other. So, critical that whoever is arranging this, is hosting this is working with the management to make sure we have sponsorship and their kind words. Next slide.

On the communication side, I put together a bit of a timeline. Don't get locked into the exact dates, not everyone is going to do it exactly the same. But, in planning for this, whoever it might be, if it's a corporate resource or if it's someone out of a facility, along about six weeks out we should be talking to, in my case it would be at a corporate level talking to the facility. One, make sure they're receptive to this, and I'll use these words, "Don't go where you're not loved."

I used to send someone out to scope it out, but if we get on a call, you can kind of sense that, hey, I'm not sure that these folks want to do this. Then it might be time to back out and try another

facility. On the other hand, we may find very likely that it's going to be embraced and you've begun the warmup and the introduction. So, we're not surprising people a couple days ahead of time. So, starting out six weeks out, four weeks out whatever that might be it's pretty important with many things, but certainly with treasure hunt.

And then five to six weeks out, begin inviting attendees. Whether they be from sister facilities or from other companies or from Department of Energy. Maybe you're going to invite your utility or a vendor. Start that process early, things change over time. Three to four weeks out, I usually talk about a month out, have a web meeting to go through kind of what we're doing today. What is a treasure hunt? How does it work? Who gets involved? What's the responsibilities? Those types of things.

And very importantly on that time is getting the contact person at the facility. You need someone that we can say, "Hey, where's your data? What are your energy prices? What's your energy consumption?" All those types of things, so important to have someone at the facility that we can get information from. Maybe two to three weeks out we're beginning gathering data, maybe get it earlier than this, that's fine. Get logistics in place. So, data such has have you done past assessments? Do you have particular items that the plant wants to look at to make sure we cover them? Are there projects we want to look at? Those types of things in getting the logistics in place. That's the silly stuff we don't like to think about.

Do we have – it's amazing how many times I show up, and we say, "Well, do we have a room? Do we have a projector? Do we have a means to show a slideshow? Do we have lunches? Do we have a start time?" Silly stuff, "Do we have flipcharts?" But, all those things done ahead of time makes a big difference. If you show up and say, "Yep. We no we have a room. The projector works. We have flipcharts. We know who's going to be there." Those kind of nitty things that have to get done, and again with the contact person.

And then a couple weeks ahead of time, I often do it a week ahead of time. If needed, do a pre-treasure hunt training. It'll be a bit of a repeat from the initial call, but if you've got – we say we've got an additional number of folks that are going to attend another call, no big deal, worth doing. And then the week before or even a few days before, a call just a real quick call, 15 minutes to make sure all the logistics are in place, things are still happening. We know

what time we're going to start. We know what time we're going to quit. Oh, we had a whoops, we'll have to change this. Just to make sure we're ready to roll on Day 1, which is often a Sunday, not always. But, on Day 1 we're ready to roll.

If we can at that time determine what the teams are, if there are teams and who is on them, that's great. If not that can certainly be done on Day 1. All this could be done on Day 1. You just make Day 1 a little bit harder to get through. Next slide.

Okay. On the organization portion, so it's things like how many people are you going to have there? Where are they from? Are they corporate? Are they sister facilities? Are they outsiders? Whoever is organizing needs to know this, so you can communicate with them. How many teams? I try to do five people per team. Everybody has their own methods. So, we have 20 people, you might say, "Gee, we can do 4 teams. What would the teams be?"

So, we're thinking about it rather than Day 1. Ahead of time you're saying, we're going to have a team on facilities, building envelope and compressed air or whatever it might be. Sometimes it's only one team. That's fine. How many days? How long are you going to do this? Let's agree upon we're going to start around Sunday, and we'll finish on Tuesday at noon. Or we're going to start on Sunday, and we'll finish Wednesday morning, whatever it might be.

Those things need to be organized ahead of time. Who was the host? It might be the same person that's arranging it, or it may well be someone at the facility. Again, we need to know who that is. There are responsibilities for a host that we want to cover ahead of time. Who's going to sponsor it? This is the management thing again. So, who's the manager that's championing this? And will they be available to via Zoom, via phone or physically there to give us a rah-rah session and attend.

Now, I've had a number where management stays in the treasure hunt and performs the hunt with us, and that's great. It works really well. And then a case, how will the discussions be held? So, in the virtual, and Alex is going to talk about this in a minute, how are we going to talk? How are we going to communicate? Are we going to use Zoom? Are we going to use Teams? What are we going to use? We're still learning about that, but the first one went pretty well. Next slide.

So, execution where the rubber hits the road, I certainly won't hit on every aspect. But, how are we going to make this thing work?

Well, we may want to deploy tools, maybe not. These are things like data loggers and measuring devices. Do we want to deploy tools? Maybe we want to do those ahead of time. Sometimes we'll say, "Hey, let's put a datalogger on your air system two days ahead, so we'll have some information." That can be decided prior to the event.

And then when we are executing, what tools do we use? Now, DOE uses a suite of tools called MEASUR. I think they work really well, and yes, I'm biased. They're nice. They're easy to use, some great calculators. So, at DOE we typically at this point now are saying, "Let's use MEASUR." So, again, ahead of time, download the measure tool. Easy download, but very often corporate IT folks need to give permission for the download to happen. So, rather than trying to do it day of, get it done ahead of time. save that time delay we get by getting permissions.

And then crowd control, manage the teams. Whoever's the host, whoever's going to be running this, and the job is to manage the team. So, make sure the teams are looking at different opportunities. Really looking at opportunities, are being engaged, using the tools, all of those things. Next slide.

So, this is just a pie chart on the MEASUR tool. Don't try to read it. the circle is treasure hunt. So, the MEASUR tool is more than just treasure hunts. There's air. There's steam. There's pumps and fans. In our case, it's treasure hunt. Sorry for the visual, you can't see it. Over on the right, all those boxes are different calculators that are available in the measure tool. There's compressed air calculators, lighting calculators, steam calculators, gas calculators. I won't remember them all.

And always the option of using your own calculator. So, if you happen to be using the MEASUR tool and say, "I've got a calculator I like better." That's fine. You can still use it. There's an option here to just use a custom tool. I do that often. I have tools I've gathered over time that I might use that are not part of the MEASUR tool. So, no problem with that. Again, it works pretty easily. We're liking it a lot. Next slide.

Sorry, again. This is one of the outputs. This is the treasure chest, it's called, of opportunities. If you can see it a little better than I can on the left are indication of what the opportunity is, what the savings is in annual dollars, BTU or KWH savings, and percent of total energy spend or total energy use savings. Next slide.

This is a report out. It's an executive summary. Sorry, again, but it summarizes what's our savings in electricity, what's our savings in gas. It might be water in there if we had water. It could be other fuels. Lots of options in there. The charts are showing electricity and gas and the almost invisible pie chart puts it up by teams and what their findings were. Next slide.

And then I think lastly is not a software tool but data gathering tools. This is not in the current DOE toolset, but very similar. Very often, I would say nearly all the time, we send a toolkit from DOE that includes tools like those shown here, HOB0 monitoring devices and digital multimeters, ultrasonic leak detectors, infrared leak detector, lots of neat tools. Even if we don't use the tools, very often we do, it's nice to have them available to review with folks what's out there that can be used to determine energy loss or energy savings within a facility. Next slide.

Okay. That's my time, and I think we're going to do questions over GoToWebinar, so I will pass it back to Eli.

Eli Levine:

Awesome. Thank you so much, Walt. That was really great. Just a nice distillation of the tools and resources the DOE has to offer. So, I definitely hope that our partners, if you're interested in learning more about this, talk with Walt, talk with the program, take advantage of our diagnostic equipment program as well as the measurement tool suite. Well, from one Walt to another, I want to turn this over to our friends and colleagues – oh, I take that back.

Before we turn this over to Walt Tunnessen, time for one more poll. So, if you could go to [slido.com](https://www.slido.com) and the #DOE, we want to hear how familiar are you with ENERGY STAR treasure hunt resources? 1 being unfamiliar, 5 being very familiar. As many of you know, the ENERGY STAR program exists out there, and we think it's just a phenomenal program that's been doing this for many, many years. It has a great team, and we think that there's great ability for partners to leverage the unique resources at the individual programs and find ways to participate in both where appropriate.

So, that was one of the reasons we were excited to reach out to Walt and his colleagues to see what resources they have here, but more important to give them the platform with Better Plants to talk about how folks can take advantage of what ENERGY STAR is doing as well. So, interesting poll results coming in so far. We have about 29 votes so far. It looks like 2 is really leading. So, let's give everyone another minute or two to turn your votes in.

Just to repeat, 1 is not familiar with them, and 5 is you are very familiar with them. Looks like pretty even distribution with a slight advantage for number 2, which is loosely familiar. So, as we wait for another vote or two to come in, I will use this time to introduce Walt. Walt Tunnessen is an innovative and strategic thinker with a track record of developing and implementing successful energy and environmental management programs. One more vote came in for number 3.

He is a leader and subject matter expert in the areas of strategic energy management, industrial energy efficiency and corporate sustainability. He's been the national program manager of the ENERGY STAR program since January of 2002. So, coming up on 19 years there. So, this is good. This is very interesting. Thank you, everyone for participating in your votes. And Marissa, let's turn this back over to Walt. There you see Walt's smiling face, and with that, Walt, I will turn this over to you to talk about energy treasure hunt resources from ENERGY STAR.

Walt Tunnessen:

Thank you, Eli. And thank you for inviting me to participate in your webinar today. What I'd like to cover is some of the resources that ENERGY STAR has developed. But, I'd like to begin, and you can move onto the next slide, just providing a little bit of context about at least ENERGY STAR's involvement with energy treasure hunts.

So, we really began to hear a lot about energy treasure hunts and hear that other companies were interested in energy treasure hunts back in 2008 during the great recession at a time when a lot of companies weren't really spending a lot of money on capital upgrades and investments. So, people were looking for strategies for operational, behavioral based energy management savings. And as an energy manager and ENERGY STAR is a program that promotes corporate energy management, we're also looking for ways to how do you help people build stronger energy management teams?

And we heard Toyota talking about using energy treasure hunts, and we saw some of the results that they were achieving through this. And we said, "This is a really interesting approach." And Toyota began to share this with other companies. They worked with their suppliers. They worked with other companies in the automotive industry that were part of an ENERGY STAR initiative with motor vehicle sector. And we saw a lot of companies having a lot of success with energy treasure hunts because they were less

threatening than doing an energy audit or an energy assessment.

If you're a corporate person and you're coming into a plant and you say you want to do an energy audit, sometimes people get a little nervous about what that really may involve. The other thing is that audits and assessments, they didn't always involve the people who were using energy. They weren't always engaging the end users and the operators. Whereas treasure hunts were really a simplified kaizen event that were accessible to somebody who maybe like an hourly employee or a plant employee, somebody who doesn't have a background in statistics or is not a corporate energy manager or CEM.

They gave them the opportunity to get involved. And more importantly, it gave them the opportunity to learn about the cost of energy waste, and then to own the solution. And most importantly, the opportunity to present the solution to their management, as Walt just mentioned, having that management there, corporate sponsor there during the report out of the session is one of the absolute key success factors for successful energy treasure hunt. So, we observed all this at the ENERGY STAR program, and when the guy who actually invented the ENERGY STAR program retired from Toyota, Bruce Bremer, we said, "Hey, let's hire Bruce and write a guidebook because other companies in the US need to know about this."

So, we developed a guidebook initially for industrial organizations. And we saw a lot of companies pick it up, started using it. The approach really started to spread through a lot of companies that were part of the ENERGY STAR Industrial Partner Network. And then our colleagues in our commercial building side of the program said, "We really need to get other types of sectors besides industrial sectors more involved in this." So, we began to look at how can we build out more resources. Things like tip sheets or things like detail sheets that do basic summarizing savings.

And the thing that we launched last year really helped promote treasure hunts was a campaign, a recognition campaign called Find the Treasure. And if you move onto the next slide, I'll tell you a little bit about that. So, this year, 2020, was supposed to be the big year to promote energy treasure hunts. We did a soft launch last year of this campaign called Find the Treasure where we asked people who were conducting energy treasure hunts to share their results with ENERGY STAR. If they did that, we would create a little profile, or what we call a baseball card, and put that up on our website. We'd send a certificate that the teams could use to show

the success to not just their team members but also to the management at their facility and other people within the organization.

And this was going to be a way to really generate a lot of interest in energy treasure hunts. Not just in the industrial side, in other sectors as well like hospitals and schools and universities, retail, sectors that really had not really embraced energy treasure hunts. Unfortunately, the COVID-19 pandemic has put a little bit of a damper on people conducting treasure hunts. But, what you're going to hear later today is that you can do treasure hunts, and I'll actually share some resources that we've developed that include some tips about how to adapt your treasure hunts for COVID-19.

But, before going into that, let me share a little bit of some of the resources that we've created to help you conduct your treasure hunts. You can move onto the next slide. This is our campaign again, so I guess I'll say another word about this. The campaign is something that anybody can participate. If you're part of the better plants program, if you do a DOE-oriented treasure hunt, you're welcome to share your findings. The idea here is to help people who haven't done an energy treasure hunt see what the opportunities are.

'Cause if you look at the numbers here, and I have summer result numbers here at the bottom of the slide, or if you look at the individual baseball card for the different facilities that have done treasure hunts, you'll see some pretty impressive results. And you have to keep in mind that most of these types of savings are being found through operational behavioral, not large capital investments. Sometimes, sure there's some upgrades, and some may be a little more expensive than others. But, by and large it's not big capital projects.

So, what we're asking people to do is just to fill out a simple online form, and if you do that we'll send you some recognition materials that you can use. But, more importantly, you're going to help inspire other people to take action to save energy. And from my perspective that helps protect the environment. That's something I'm thinking most people want to do. So, now you can move onto the next slide, and I'll talk a little bit more about some resources.

So, as I mentioned before, early on we worked with Bruce Bremer from Toyota to create a guide on how he conducted an energy treasure hunt. It's pretty much the exact same type of things Walt Brockway just talked about. The approach is, I think, pretty

standardized three-day event, usually start on a non-production day, but it doesn't have to be that depending on your operations. And it does _____ [*Audio cuts out*] planning like Walt just said.

We also created a shorter guide, and if you're trying to maybe engage a facility or manage a facility and don't want to read a 30-page guidebook on treasure hunts, show them the four-page what we call "lite" guide. It's really geared more towards commercial buildings. But, it does describe the process that's involved and gives someone a good overview. You can move onto the next slide.

To support the guidebooks, which really focus more on the planning phases and the steps you need to do to organize your treasure hunt, we compiled a bunch of what we call treasure maps, which are just basically checklists of the types of things that people typically find in energy treasure hunt. And we created them by different types of space types. In the industrial sector we created sort of a general industrial one and three ones for some smaller plant types. And the thing about industrial is a lot of times – every site's a little unique, so it's maybe a little hard to generalize. And a lot of people often have kaizen-type checklists.

But, in the building sector, we found that a lot of people really needed some ideas and suggestions. So, we've created about 14 different types of checklists or treasure maps for commercial buildings. And some of these may be applicable to space types that you may have even in an industrial space like office spaces, cafeterias and so forth. You can download these things, and they're really useful if you're working with people who don't have a technical background, if you're working with facilities people maybe are not an energy manager. You can share these checklists with them, and they can guide them.

It's not going to help them do the calculations. You can use some of the DOE tools that Walt mentioned to do that. But, it might guide someone to find an opportunity. Move onto the next slide, please.

Details sheets. When you find these opportunities and you figure out how much energy you can save through a conservation measure, the next thing you need to do is begin to organize with this _____ [*Audio cuts out*]. So, what we've done is we've pulled together simple Excel spreadsheets that help people organize their savings. These spreadsheets do not do the calculations for a lighting upgrade or if you go to turn off a compressor in a

compressed air system for certain hours, won't calculate those savings.

But, if you can calculate those savings in another tool, you can plug them into these tools, and it'll help you organize the total cost savings of your entire treasure line. It'll also provide you with the type of information you need to plug into our Find the Treasure campaign and also express what some of these energy savings are in things like greenhouse gas, emissions reductions and some other intensity metrics. You can move onto the next slide.

Videos. These days, a lot of people like to get information through videos. So, we've produced a number of videos to talk about energy treasure hunts. We actually filmed an energy treasure hunt at a Honda small engine plant and put together a five-part series that kind of goes through the steps of an energy treasure hunt. These videos are generally fairly short. They're on YouTube. They're also accessible on our website. These are great things to show participants in a treasure hunt who haven't been involved.

The first video in this series is a really good video to show people in plant management help to get buy-in. And they're really something that you can use to both train people and build support for energy management. We also include a few other videos from other companies. We've got a video here from Nissan talking about how they used energy treasure hunts, plus there's some other ones on our website. This is a great resource you can, again, if you're engaging in building teams. You can move onto the next slide.

So, to wrap it up, I'd mentioned that we launched this campaign last year hoping 2020 would be the big year for treasure hunts. COVID's put a little bit of a damper in that. But, we are seeing companies that are finding ways to adapt their treasure hunts to deal with the pandemic. I had the opportunity to interview a lot of different companies that have currently done treasure hunts. And working with Bruce Bremer, we put together a tip sheet that hopefully can provide some ideas of how to adapt your treasure hunt during COVID-19. This is available on the ENERGY STAR website, and at that link there you can find all of our energy treasure hunt resources.

And you're going to hear from our next speaker, who's going to talk about actually how they did a treasure hunt during COVID. I think there's things you can do. You obviously need to be safe about it, and you need to take into consideration your organization's safety measures. But, we are seeing more people

beginning to look at how they can still conduct a treasure hunt. It's going to look a little different than maybe what it might've, but there are ways to do it and hopefully this tip sheet can help you. So, with that, I think that's my last slide, Marissa. And I guess we'll do questions at the end if you have additional questions about ENERGY STAR or our treasure hunt resources, this is my contact information. Thank you.

Eli Levine:

Thanks so much, Walt. That was really great, and I really do hope – I want to encourage people to participate in the ENERGY STAR campaign as well as to take advantage of their tools that they developed. They're really useful. So, before we turn to our third speaker, who can share the real-life examples of how plants are still getting this done and driving savings through virtual treasure hunts, I just want to take the temperature of everyone who's on the call.

So, one last Slido question, www.slido.com, #DOE to respond. Did you have a treasure hunt planned this year? And then if you did, yes, we had one, we postponed it. Yes, we had one, we cancelled it. Yes, we had one, we're either carrying it through as planned or we already did. We're making it virtual. Or no, treasure hunts weren't on the radar this year or weren't on the radar before the pandemic hit. So, we're up to 23 responses. No treasure hunts planned so far in the clear lead. Which is interesting. I'm encouraged to see that hopefully the resources provided today can really get a couple more folks off the sidelines _____ these treasure hunts. And particularly with Alex's presentation in a few minutes to hear about how you can safely put them on virtually.

So, let's get a few more responses in. We're up to 29 responses, 30 responses. Let's get – 31. Maybe get everyone another minute or two. The other thing I'll note while we're waiting for the final response or two to come in, please use the Q&A app through on Slido to ask your questions. There's a wealth of knowledge between the Walts and Alex here, particularly if you're not familiar with treasure hunts, just ask away. You can make your questions anonymous if you want. You can identify yourself and we'll also share everyone's contact information so you can follow up online as well.

Okay. So, it seems like we're holding tight at 31 votes. So, let's move back to the presentations. And I can introduce Alex Floyd. Alex is the senior manager for sustainability at Tyson's Foods. He's responsible for the establishment of goals across the business units that align with Tyson's sustainability efforts creating methods and

metrics for reducing energy, greenhouse gases, waste. He's been with Tyson's foods for over two years now and brings a background with a Master's of Science in sustainable engineering, bachelor's in mechanical engineering, and he's a certified energy manager and a certified demand side management professional. So, I could probably go on, Alex, with your credentials and experience, but I'll turn this over to you to share what Tyson's Food has been up to with how everyone can learn from that. So, thank you so much for joining us.

Alex Floyd:

Thank you, Eli. Now, really before I get started with the presentation, I'd like to personally thank the Department of Energy for giving me this opportunity to present alongside the DOE and the EPA. Really what an honor that is. It's also an honor to represent Tyson Foods. As we can talk about the efforts underway to reduce our energy consumption and also the greenhouse gases that are related to that.

There's two main themes that resonate throughout my presentation. The first one is my pride in this great nation, and its willingness to step in to help our US facilities to continue to get better. We were truly blessed to have these types of resources and really the technical experts that we have available to us through our government. The second is my pride in Tyson Foods as we continue to provide high quality protein to our communities.

And really, there's not been a better time, at least in my opinion, to showcase Tyson's resilience and strength as we've dealt with the challenges presented with COVID-19. Next slide, please.

Thank you. So, quick background, and Eli touched on some it, so did Walt. I did join Tyson Foods back in July of 2018. Later in that year, in December, we joined the Department of Energy's Better Plants Program. We are also members of ENERGY STAR's program as well, and we look forward to kind of extending that and getting more engaged within their program.

In early February of this year, the Department of Energy helped us facilitate our very first energy treasure hunt. In the past we've performed comprehensive energy audits. Both with outside firms and also with internal Tyson teams. But, what we discovered going through the treasure hunt process is the quick actions that would take place when we actually allowed our operators and managers of that equipment be the ones to champion the discovery of the energy opportunities.

And this is something that's been touched on in the previous presentations. But, a lot of times those that are engaged in those energy audits aren't even the people who are operating the equipment. So, there is actually something else we noticed. There's a big difference in me – or in maybe an outside group recommending, for example, a plant to drop their compressed air pressure versus someone in the plant discovering they can drop it. And that main difference is they actually make that change immediately, and you get to start realizing those cost savings immediately.

Another key factor in this process that we just discovered is really once you give those operators, those managers of those major systems the opportunity and the headspace to essentially focus on that energy, they can find the opportunities. They already know what the obstacles are, and it's just a matter of taking that time to actually solve the main underlying problem rather than just treating that symptom.

So, often we see in our facilities that we're really good at treating the symptoms because that continues to allow you to produce your product. But, you don't actually have the time to go back and address the real issues. And this frees up that space to do that. And going back to that example of dropping compressed air pressure, quantifying those energy savings is key. When a plant uncovers if they just saved \$10,000.00 worth of annual energy savings just from merely changing a setpoint that really means something.

Now, as you can see on the right, this was our first treasure hunt back in February with the DOE. We identified over nine percent in cost savings, and we have actually realized the majority of those savings. Now, some of the savings will result in capital projects, or some capital projects, and they haven't been installed just yet. Also, we had heavy refrigeration loads, so during the hot, humid months we are limited in the amount of refrigeration savings that we identified during this study. So, really we hope to see more significant reductions as the temperatures start to drop here in the fall and winter. All right, next slide, please.

Thank you. After the initial treasure hunt in February, we started gearing up because we had such good success from this that we're going to take this out to all of our production facilities. As you can tell from our map here, this is quite the effort due to our footprint across the United States. We have a lot of processing facilities. So, we spend a lot of time at the end of February and leading into march kind of developing our plan on how we're going to tackle

this. How to get the most bang for our buck, per se. Next slide, please.

Just as we mentioned, just like everyone else, COVID-19 hit, and then that's what we had to respond to. And at Tyson our number one goal is, or was and is, always to protect our team members. So, in order to effectively protect our team members, we did suspend travel to our processing facilities. At first, we didn't know how long that was going to last. I guess we still know how long that's going to last.

But, we're really faced with that question now of how do we continue to make that impact on energy consumption in this virtual environment? How can we make that impact from maybe our homes when we're not able to set foot on site? Or maybe you can have a select number of people that can on site, but you can't get the full team that you had access to before.

So, after actually several discussions with our technical account manager, Wade Go, which I have to give Wade a lot of credit. The Department of Energy decided to assist us with a virtual energy treasure hunt. Next slide, please.

So, we planned our first virtual energy treasure hunt at one of our larger poultry processing facilities. I was approved to go on site, but due to quarantine orders and limiting outside visitors to our facility, Walt and Wade, as well as several Tyson participated remotely. We also had two gentlemen from Nissan as well as someone from ADM that got to participate with us virtually as well. So, we enjoyed having them involved.

As you can see from this info graphic, we were very successful in our ability to uncover these opportunities to save energy. We followed the energy treasure hunt model while finding those no and low-cost savings opportunities, which similar to what Walt spoke about with ENERGY STAR how this was kind of formed back in 2008 during the recession. We're seeing something similar to that no capital environment. We've got to continue to optimize and get better with what we've got until we can start spending more of that money.

So, did a great job with this. You can see most of them were less than a year payback. It is important to note that we did have over 15 on-site team members participate each day. And most of that was due to us being employing from two close-by facilities. So, that did significantly add to the success of our treasure hunt. Now,

I will say that even though this was labeled as a virtual energy treasure hunt, it was really still an on-site treasure hunt. While utilizing off-site subject matter experts to assist us in finding these opportunities. But, again, it's something we haven't done before. All right. Next slide.

All right. So, again, this being really the first time for us to utilize both off-site and on-site team members, we did have some lessons learned. As you can imagine, most of those lessons learned centered around our communication and engagement with those off-site team members. So, just to go through this kind of quickly, we're starting to run out of time. How can we provide off-site team members better access to those energy systems?

And we heard from Walt Brockway and kind of the timing it takes to do a successful energy treasure hunt and at six weeks looking back. Unfortunately, we don't typically operate like that. With us running and gunning we don't have a lot of time to do a lot of that background, that preliminary work. But, we did realize that that did hurt us when it comes to those off-site team members because they do have to fully rely on those members that are there on-site to gather that information.

So, we do need to spend more time on that preliminary data gathering, which includes gathering equipment data, operational data, your electricity consumption and also deploying those dataloggers on that major equipment before the energy treasure hunt begins. It's going to be key for us moving forward, so we can start really formulating those additional questions that lead us to the key areas that need to be evaluated.

Next, how can we improve upon the interaction between the off-site and on-site team members? So, this is difficult. How do you communicate better with those off-site employees? So, we decided that we should limit our whole group meetings to innovate and recap. But, it's really important that those off-site team members are assigned to a specific team. And then virtual breakout sessions should be periodically scheduled so that on-site and off-site team members can collaborate together.

And then the last one is really how can we engage off-site team members better? This is where the pre-work will come in handy. The understanding of why we're operating the way we are and what's holding us back from being able to make this change, those are the key questions that we've got to ultimately answer. And these problems can typically be identified through detailed

questioning. Then you just need to find the solution. So, our virtual team members can really play a vital role in this questioning as well as researching essential solutions.

They can also be the ones that are kind of laying in the background on the computers quantifying the energy savings while the on-site team members are still uncovering those opportunities. So, again, how can we really engage them better? And we know that they are most likely going to be just really in front of a computer, so what can they do online that can help those that are out on the side. Next slide, please.

And I didn't get really too much into the technical details around really what we identified, what we found. They're pretty common within our facilities. Common problems but different solutions that we had to find. But, my advice in closing is, please take advantage of our resources that we have. Our technical experts over at ENERGY STAR, the Department of Energy, one of the best parts about it is to organizations is that they're free. So, they don't cost anything extra, and it's really just you putting in the time to develop a relationship with your technical account manager, or your contact over at ENERGY STAR helping you engage better and finding these solutions.

I couldn't speak more highly of our interaction with these guys. Please reach out to the Walts for additional help. Eli, I'll kick it back over to you for the Q&A.

Eli Levine: Fantastic, Alex. That was really great.

Alex Floyd: Thank you.

Eli Levine: Thank you for that. So, the questions are coming in. Once again, I encourage you to, as you have questions, to go to www.slido.com. Now we can see the questions come in. So, top-ranked one is, "I'm excited to learn about energy treasure hunts." It's great to see everyone excited. That's not a question. Let's move down to this third question.

"We've never performed a treasure hunt before. Is it possible to start off doing it virtually, or do you need someone familiar with the process before running one?" For the two Walts and Alex, feel free to chime in. They're not directed at a specific person. Just chime in as you see fit. It's a free for all.

Walt Tunnessen: Sure. This is Walt Tunnessen –

Walt Brockway: This is Walt Brockway. I did answer online. But, I do think it's possible to start out with a virtual. It's just going to take really, really good and frequent communication, and I'll blow Alex's horn. Having someone that's able to lead it very competently really makes a huge difference. Yeah. I think it can be done.

Walt Tunnessen: This is Walt Tunnessen. I would agree. If you have an opportunity to work with someone that has facilitated a treasure hunt before, it might be helpful to do that in this current environment. Most of the people that we know who have done treasure hunts during COVID have had some experience previously doing them. If you've done a lot of energy audits that may be helpful too. But, take a look at our tip sheet because you're going to probably need to modify things. And as Alex said, you're going to need to think about how you set up remote teams and just your relationships working with folks at the sites and whether those people have any background in energy management will make a big difference.

Eli Levine: Alex, anything you want to add?

Alex Floyd: No. Having it virtual does present its challenges. But, it's doable. The truth is, if you're an energy manager, you're going to have to be able to do something remotely. So, it's a matter of making that work. So, you're going to get really no choice. I'm speaking from someone who's in a similar position.

Walt Tunnessen: Can I actually ask you a follow-up question, Alex? This is Walt T. I mean, you've done the virtual treasure hunts. Do you think there are things that you've learned from doing them virtually, especially by having subject matter experts maybe calling in that you might, when we return to normal in the future, adopt for your treasure hunts going forward?

Alex Floyd: No. We absolutely will. We've got larger systems such as our monitored refrigeration systems or your compressed air systems, your steam systems. We had those subject matter experts within our engineering group. They specifically focused on those systems. So, unfortunately, they're unable to make it to maybe a three-day treasure hunt. But, for them to be able to call in for an hour to meet back and to help with calculations, it's definitely something that we're going to utilize moving forward.

Also, I mean, you're limiting your expenses to the company because now they don't have to travel. So, it's a great thing moving forward, and it's something that we may not have thought about

had we not jumped to this remote environment. Great question though.

Eli Levine:

Yeah. I think the pandemic is forcing all of us to think differently about how we used to work and moving forward, what lessons have we learned from our experiences here? So, that's really great to hear. Thanks, Walt. Another question we got there is, "What are the typical savings found during an in-plant training and virtual in-plant training?" I know that y'all have done between the two Walts, you've helped countless companies work on in-plant trainings. Is it possible to generalize about what you've seen from the savings?

Walt Brockway:

This is Walt Brockway, and I'm not sure I'm directly answering the questions. Having done 100-plus of these, the average savings is just under eight percent. That ranges from struggling to get 1 percent to over 25 percent, if that's the question. If it's what are finding, it's the things that Alex mentioned. It's compressed air systems, steam systems, fans and pumps, all the typical candidates that we just had the opportunity to focus in on.

Walt Tunnessen:

Yeah. And I would just chime in and say we see similar numbers. And part of the whole idea with this Find the Treasure campaign that we're running where if you submit something we make a little baseball card profile is actually to answer that question. We get this question all the time, and people need to show their management, what the savings could be. So, if we can get people to share what they're finding then it helps other people make the case to their facilities that these opportunities are out there.

So, if you look at our website there, you'll see a pretty wide range of numbers in terms of either percentage or dollars or BTU savings. But, generally, I think it's fair to say you're not going to not find anything. You're probably going to find a lot more than you realized.

Eli Levine:

That's great. Well put, both of you. Next question, I guess I'll start with Alex on this one. "What is the major difficulty that you faced with the virtual treasure hunt as compared with the in-person treasure hunt?"

Alex Floyd:

That's a great question. I would say really definitely it's engaging that outside employee. Again, we did it one time, and what I realized, it really takes a lot more effort on the coordination side to making sure that you got those other meetings set up, and you've got the teams set up better and that you can just really take advantage of that outside team member. But, really engaging

someone that's not able to see anything.

We have some strict policies around not having cameras and that kind of thing on our floors. So, that makes it a little more difficult as well. Some people may not have that constraint, but that would be my answer.

Eli Levine: Either of the Walts, is there anything that you want to add? Otherwise, we've got a number of good questions coming in, I'm happy to move onto the next one.

Walt Brockway: Not being there's a real pain. But, I think Alex hit the answer.

Eli Levine: Great.

Walt Tunnessen: I agree.

Eli Levine: Next question, "If I set up a virtual treasure hunt, how many of my plant folks should I pull into the event? Any recommendations on who are the best folks to involve?" Alex, I'll let you start with this. You've done the virtual treasure hunt.

Alex Floyd: I think I saw this in both the Walts' presentations. I know what really kind of stands out to me is Walt Brockway when he was talking about – what was the term you used in that slide? Oh, the plant management, what'd you say? Help me out, Brockway.

Walt Brockway: Sponsorship.

Alex Floyd: Sponsorship. Yes. Sponsorship, sponsorship. So, that's where we've seen a lot of those really good things coming from your plant management groups. Even all the way up to – we had a senior vice president participate on a Sunday kickoff day. That was really – primarily within the plant we've got large maintenance teams. So, we have refrigeration supervisors that help. You've got your electricians. You also have other line supervisors and environmental managers within Tyson.

But, really, there may be some others that just have a drive and a love for sustainability and energy savings. You want to leverage those employees as well.

Walt Brockway: I agree with Alex, you absolutely want the people that are turning the wrenches and running the process involved with it. They know where the opportunities are. If they find it and put a number on it,

you can be they're going to try to get it accomplished. I think that's very key.

Walt Tunnessen: I would say if you're doing it during this COVID period, you're obviously going to start off with who can actually access the site. I'd look for people then who have had some maybe past experience or involvement with any kind of energy management or energy projects previously in the plant. Then if you wind up targeting certain types of processes or areas in the plants, it's going to be really important to find an operator but also somebody who has some kind of decision-making authority over the operations of that equipment as well.

So, those kinds of people are very useful for engaging their treasure hunt. Generally, we're seeing with COVID maybe a little smaller groups of people participating. But, you still really gotta get the – find the right people at the plant level both on the operator and in the decision-making. On the equipment side, obviously, you need to have the plant management present and support it there at the final report out meeting.

Eli Levine: Great. So, we only have time for a few more questions. But, I want to – let's throw a softball out here to you guys. Alex, maybe you can share your experience on working – Wade was helpful to you. But, how do I get DOE or EPA to help me run a treasure hunt? So, Walt Tunnessen, we'll let you go first with how EPA can help run a treasure hunt.

Walt Tunnessen: EPA, we primarily provide guidance and tools. We provide some training on those tools, and recognition. We're not in a position to really help you run the treasure hunt on site. But, we can sometimes connect you with other people who are doing treasure hunts and my let you tag along. And we do provide some, like I said, training on the process. But, we don't facilitate the treasure hunts. And if you have questions, you can reach out to me.

Eli Levine: That's great. And I just again would encourage everyone to check out EPA's website for the resources they put together, which I do think are really helpful. Walt Brockway, how does DOE help with running the treasure hunt?

Walt Brockway: Well, my shorter answer is, contact your account manager. But, to build on that, DOE does help facilitate treasure hunts. The idea is to talk with your account manager, get an in-plant training. I think going forward, we'll have an ability to do a virtual in-plant training. So, the key is talk to your account manager and get things

moving. DOE does allow for those hosting a treasure hunt to invite others. So, there is the possibility say, "Hey, I'd like to tag along," as long as the hosting facility allows it that's an opportunity to learn the process as well.

Eli Levine:

That's great. That's one of the things we saw at Tyson's was that even though they were doing a virtual treasure hunt, they made room to allow some of our other Better Plants partners who may not be able to join. So, we have a number of other good questions. With that, Marissa, I think I'm going to turn it over to everyone's contact information and we we'll be happy to answer these offline if you just want to send to myself, so maybe the next slide.

So, that has everyone's contact information. If you ask one of the questions that we weren't able to get to, please shoot us a note, and we are more than happy to follow up and get more information there. I know we want to end promptly at 2:00. If we could just go back for a second to the previous slide, so this is our online learning series. We have the next several queued up for everyone to take advantage of. So, please go ahead and just register for all of them. They're on our Better Buildings e-learning center. You can go back and review any previous ones.

This was really wonderful. I want to thank you guys. Walt Tunnessen, thanks for walking over the virtual mall that separates the EPA and DOE buildings to join us today. And Alex to join us from Tyson's Foods. We've had all sorts of people talking about essential workers, but I know all of us are really grateful for what Tyson's has been able to do to keep the plants running and hopefully now running more safely and being able to provide all the valuable food and all the other things that Tyson's does for the country. And Walt Brockway, every day we get to work with you. I'm just so grateful that you're a part of our team.

So, with that, you have all of our contact information. I want to thank you all for joining us today. I look forward to seeing you again next week to talk about pumps and fans and we'll talk to you soon. If you have any other topics that you'd like to see us cover, by all means, send us a note as well. We finally it's just so great to bring people together during these crazy times. So, with that, thank you all so much for being a part of this, and I will talk to you all next week. Thank you.

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