

Andrew: Welcome to the DOE Technical Assistance Program and the SEE Action Network webcast Local Strategies for Whole Building Energy Savings.

I wanted to remind you all that your phone lines are on mute to cut down on background noise.

If you do have a question at any point during the presentation, please enter it into the question box that you should see on the side of your screen. We will monitor those and try to get to as many questions as possible a bit later in the presentation.

Please feel free to use the chat window as well if you're having any technical difficulties and we'll try to resolve them as we go along.

With that, I would like to introduce Molly Lunn, the lead for the SEP and EECBG Technical Assistance Program for the U.S. Department of Energy, who is gonna get us started today. Molly?

Molly Lunn: Hello, everyone, and thank you, Andrew. I am Molly Lunn from DOE's Technical Assistance Program and I'd like to welcome all of you to the first in what will be a series of webinars that we're cohosting with the State and Local Energy Efficiency Action Network also known as SEE Action.

The series is an opportunity for state and local officials to learn more about SEE Action's work as well as the particular energy-efficiency strategies that SEE Action is working with state and local governments to deploy and then also the resources that are available to state and locals to pursue these strategies both from SEE Action and from TAP, the Technical Assistance Program.

Today's session, as you know, is focused on local strategies for whole building energy savings. It's focused on existing commercial buildings. And it's being co-lead here at DOE by my colleague Cody Taylor.

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Some of you are likely familiar with TAP. It's been around for about over a decade, but I do want to just give a quick reintroduction or introduction to those of you who aren't – this is new to. The Technical Assistance Program provides state, local and tribal officials with tools and resources needed to implement

successful and sustainable clean-energy programs. Most recently, our framework has been with the Recovery Act. Staff has been really focused on both accelerating the implementation of Recovery Act projects and programs and their performance, but also on trying to increase the return on and sustainability of those Recovery Act investments and starting to build protracted clean-energy capacity at the state and local and tribal level.

So it's been through one-on-one assistance, an extensive online resource library and the facilitation of peer exchange will really – have been offering a wide range of resources to serve the needs of officials and their staff.

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So, as some of you know, last fall, DOE did announce that TAP would be transitioned to a new post-ARRA framework. And over the last several months, TAP has been conducting an assessment of the program, both the services we offer and the needs of our various audiences. At the same time, we've continued to facilitate peer exchange both one-on-one peer exchange, some small group peer exchange and, finally, regional peer exchange, which we do via calls, monthly regional peer exchange calls. And we encourage you to get involved with that now.

Here's a link to our Peer Exchange Hub that's online, where you can see past presentations and materials as well as get connected with your regional coordinator at the local level. We have those for each region across the country. And those are our project officers here at DOE, who some of you are likely familiar with and they can help connect you with your peers.

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And we also want you to stay tuned. Based on the assessment that's been happening over the last several months, we do have a number of announcements that'll be coming up over the next several weeks this summer. That includes additional upcoming webcasts, including – and Cody will talk about this a little bit later – but the future SEE Action webcast series, the availability of direct technical assistance, we'll have some updates on that, and some other new and exciting resources that we've been working on with various colleagues here at DOE including our Better Buildings Initiative partners.

Today's webcast will also be available online. Here's the link to where you can find the presentation as well as the audio transcript.

And, in the meantime, please don't hesitate to contact us. Here's the Technical Assistance Program e-mail address and we welcome any questions or comments you have or needs you have that we should know about.

So thanks again for joining us today and thank you to Cody and Andrew and our local government speakers and hope that you can join us for our future webcasts.

Andrew:

All right. Well, thank you, Molly. And with that I think we will dive into the meat of our presentation.

We are going to start today by hearing from Jim Gallagher, who is the senior manager for strategic and corporate planning at the New York Independent System Operator. Jim also serves as the chair of the Existing Commercial Buildings Working Group for the SEE Action Network. And so, in that capacity today, he's going to be introducing the SEE Action Initiative and some of the core policy areas that the Initiative is focusing on. Prior to joining the NYISO at the beginning of 2010, Jim was the senior vice president for energy policy at the New York City Economic Development Corporation, where he served as an energy policy advisor to Mayor Bloomberg and led up the energy policy department, which had a major hand in the implementation of the energy-related recommendations in the City of New York's PlaNYC.

So Jim is wonderfully situated to give us of our overview of SEE Action. We thank him for joining us today. And, Jim, over to you.

Jim Gallagher:

Okay. Thank you very much, Andrew, and thank you everyone for joining the call.

I'm going to begin by going through the agenda, which is the next slide. Thank you. Basically, what I'm gonna cover is an overview of what SEE Action is before we get started. Specifically, I'm gonna focus on the Existing Commercial Buildings Working Group, which I co-chair. And, as part of that discussion, I want to review priority policies and programs of the Working Group. We will then get into a local government example and in this case the City of Philadelphia. We will then transfer to related DOE initiatives and other things that are happening at DOE supporting initiatives such as this. And then we'll end with a discussion

about, first, how you can get involved and also any thoughts or recommendations or ideas that you might have.

And, with that, let me move first into what is SEE Action. Next slide, please.

SEE Action, as Molly had mentioned earlier, it's a state and local energy efficiency action network called SEE Action. And this effort is facilitated by the federal government and, in particular, by DOE and EPA. The whole idea of SEE Action is to build on the progress of the National Action Plan for Energy Efficiency with the idea that we would scale up energy efficiency as quickly as possible with a goal of achieving all cost-effective energy efficiency by 2020. So it's a very aggressive goal. And through the various working group activities of SEE Action, the intent is to identify policy programs that will help us achieve that aggressive goal.

SEE Action is also meant to complement the activities and the investments that were made through the American Reinvestment and Recovery Act. And the whole notion of what we're doing here is to try to identify policy and programs that help us move beyond just one-time, large, lump-sum investments into policies and programs that are really sustainable that don't need such large stimulus investments in order to achieve the results that we're hoping for.

And to this end, SEE Action primarily aims to assist state and local governments in a number of areas, first of all, advancing energy efficiency policies and programs that can help you in this sector; helping to identify and remove barriers and disincentives to energy efficiency.

Many of us, even though we're in different states and different cities around the country, we're addressing the same types of barriers and problems. And there are a lot of lessons learned out there and model programs and policies that can really help one another and help us from reinventing the wheel.

And, lastly, the objective of SEE Action is to increase state and local investments in cost-effective energy efficiency.

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SEE Action consists of an executive group that's made up of more than 30 stakeholders and this is the guiding policy group for the

SEE Action program. And then there are 8 policy and program working groups and I'll touch on each of these, give you an idea of what they represent.

These 8 working groups are intended to help SEE Action achieve this aggressive goal of all cost-effective energy efficiency by 2020. And the executive group, at the same time, is made up of a real mix of members, who come from different perspectives, both state and local governments, national, regional associations dealing with energy, people who are involved in business, whether it's building owners or real estate industry and combined heat and power industry to also non-governmental organizations and environmental groups. So it's a real mixed group with the intention of giving policy guidance to the individual working groups.

The individual working groups represent areas of the economy or infrastructure that we believe are critical to achieving rapid penetration of energy efficiency across the country and across residential, commercial and industrial sectors. And each one of these working groups has a chair and most of them have a co-chair and supported by a staff person from DOE and EPA. And the working groups, they range from 15 people to sometimes up to 30 people and it's a mix of state, local and national leaders who can share their own experiences and ideas and best practices in trying to come up with a recommended approach that we can take nationwide.

Just to touch on briefly the eight groups beginning at the top and moving clockwise.

Number one, we have a group focusing on customer information and behavior. And this working group is established to assist regulators and policymakers with data issues that are associated with energy efficiency and how to educate the public, but also how to best use customer feedback on how to help customers save energy and also help in the design of better programs.

EM&V, that's Evaluation, Measurement and Verification Working Group. And the objective of this group is to come up with the tools and training to help improve energy efficiency oversight and management by increasing the accuracy and credibility of the evaluation and measurement and verification results that we're getting from programs. So we want to make sure that the tools that we use for evaluation and measurement are the best possible and

so we have an excellent working group put together focusing on that area.

The working group – well, the next group I'll touch on is Financing Solutions Working Group and that is to address, as its name implies obviously, the financial barriers to energy efficiency and what tools and mechanisms, whether it's loans or leases or service agreements, might be put in place to help address some of those financial barriers.

There is the Industrial Energy Efficiency and Combined Heat and Power Group. This group provides guidance on state programs and policies for industry, industrial energy efficiency as well as combined heat and power programs.

We have a Utility Working Group looking at ratepayer-funded programs primarily and also policies that support utilities as well as motivate utilities to pursue cost-effective energy efficiency objectives.

So the Building Energy Codes Working Group that is looking at state-of-the-art practices around the country in building codes, making sure that where we don't have to provide incentives – often times, you can achieve things much more cost effectively through codes and standards, so we have a codes and standards group looking at the development of new policies and programs that can assist residential, commercial or industrial building.

And the last two groups I'll touch on, Existing Commercial Buildings, which is the group that I co-chair, which we'll be getting into in more detail.

And then, lastly, Residential Building Retrofits. And the idea of the residential group is to establish a sustainable private-sector industry that provides home energy efficiency services.

But with that, and as you can see, we have a lot of activities, a lot of working groups and many people involved working in what we believe is a fairly comprehensive effort to try to achieve and acquire all cost-effective energy over the next ten years.

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Now, here is where I'm going to plunge into more detail on existing commercial buildings and I'll start referring to it as either

the Commercial Working Group or just plain Working Group so you know what I'm referring to.

This working group is primarily focusing on the existing commercial building stock. There is growth in the building stock, of course, but the principal amount of energy that's used in this sector is going into buildings that have been there for decades. And as we note on the slide, the majority of office space that's gonna be used in the next decade has already been built and, in fact, it's a great resource to tap for energy efficiency.

Commercial buildings use nearly half of the building energy use and 20 percent of total energy consumption and greenhouse gas emissions in the United States. And depending on the city that you're referring to, those percentages go even higher. New York City, for example, over 70 percent of the greenhouse gas emissions are coming from its building stock.

Governmental buildings are nearly 25 percent more energy intensive than non-governmental buildings. So they're a great opportunity to target not only to demonstrate that we're leading by example, but also to reap additional savings.

In terms of expenditures for energy, commercial building owners and managers are spending on average more than \$2.00 per square foot per year, and, again, that varies by city and by depending on what customers are paying for energy. But there are also – even though it sounds like a significant amount of money, there are challenges and barriers. And, again, referring to New York City, which I am closest to, even though New York City has the highest utility energy prices in the continental U.S., energy prices in Manhattan, for example, for commercial buildings typically represent less than 2 percent of the per square foot cost of leasing that building.

So the energy signals alone, the energy prices alone aren't enough to really spur the investment in energy efficiency that we would like to achieve. And, as we go on, I'll identify some of the approaches that New York is taking as well as other cities around the country to try to get around that particular barrier.

In terms of investments and economic development, I'm sure many of you have heard these figures, especially, when the stimulus monies were being invested, that for every \$1 million we are creating 5 to 15 jobs in the energy efficiency sector.

And then, lastly, and this is important to all cities, energy-efficient buildings have higher occupancy levels, lease rates and sales prices. And that not only helps put more money in building owners' pockets, it also is a help to state and local governments in the form of property taxes, title transfer taxes and other revenues associated with a healthy commercial real estate market.

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The Commercial Working Group has aggressive goals just as SEE Action overall has aggressive goals. This group worked very hard in its early stages trying to take the high-level SEE Action goals and coming up with our own Year 1 goals, 2015 goals and 2020.

So, in Year 1, which we are well into, our objective is to enlist 10 states and 30 local governments to adopt 1 or more of the Commercial Working Group 10 policy and program solutions. The idea is that if we can start getting these policies and programs in place around the country, and not just keeping them static once they're in place, but improving them and refining them, it will help us tremendously to achieve the goal, because we need to recognize that we're not talking about significant amounts of incentive money available here. So we need to look at programmatic approaches and policy approaches that aren't requiring substantial amounts of incentive.

Our 2015 goal is to reduce energy use 20 percent or more in 3 billion square feet of commercial space every year through what we're referring to as whole building approaches.

And then, lastly, in 2020, to achieve all cost-effective energy efficiency in existing commercial buildings.

So you can see that we go from in the short term having very specific goals that just try to get us out of the blocks and started working with states and communities. As we move forward, we'll refine our goals, but, ultimately, we're hoping to achieve that 2020 goal of all cost-effective energy efficiency.

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This is an important slide for the Working Group, because this really captures the key program options and the key priority solution areas that the Working Group has identified in its plan for rolling out the initiatives that came out of the Working Group. I

mean we refer to it as our blueprint. But the Commercial Working Group outlined a portfolio of ten policy and program solutions to help us get to our energy saving goals.

And for organization purposes, these ten solutions are categorized into four categories, which if you go across, what we refer to as the four pillars. We want to first drive demand for energy efficiency. Second, we want to enable efficient operations and investment. We need to build a workforce to support those prior two policies. And we want to move the market.

And going back to each of the pillar areas, I'll just touch on the program solution areas and policies that we are working to develop.

Under driving the demand for energy efficiency, we're coming out with programs including benchmarking energy rating and disclosure policies, coming up with retro-commissioning and auditing policies, ratepayer-funded, energy efficiency programs as well as public-private partnerships, and that's where local government working with the private sector. And we will get into a little more detail on these, but, today, we will spend much of our focus time on energy benchmarking as well as retro-commissioning.

Under enabling efficient operations and investment that includes strategic energy management programs, which are just mainly looking at organizational and institutional approaches to energy efficiency. We have high-performance leasing policies, so that's coming up with new lease designs that will help address that split incentive that now exists in real estate transactions between building owners and tenants. And we want to come up with – also is under this pillar area – come up with innovative financing programs including credit enhancement revolving loans and the like.

Under the pillar area of building the workforce, we have, of course, education and training. We want to come up with the materials that can be used by these training programs as well as certification initiatives that attempt to standardize training programs across regions and then ultimately across the country.

And then, lastly, in terms of moving the market, we are focusing initially on programs to refine our approaches for procurement and to promote bulk purchasing and life-cycle costing and other efficient procurement practices. And we also are encouraging

what we're referring to as the emerging technology demonstration programs and there are many good examples of these around the country. And we want to share some of the more successful initiatives, but also the less successful initiatives. Because I mean if someone is attempting to implement the emerging technologies program and it's not working, everyone should understand why and what needs to be done to move forward.

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The Working Group resources are primarily in three areas. And these are we're working to communicate the value of state and local policies for commercial energy efficiency. And we want to make sure that we can connect governments with the materials that we put together to help them as they consider their own policies.

The three buckets that we have of resources are first of all, and probably the simplest, are the fact sheets, coming up with key information on benchmarking programs, energy rating and disclosure programs, retro-commissioning and so forth. The idea of these fact sheets is to provide an overview, a high-level overview and a short amount of verbiage that explains what the policies and programs are, what the issues are, guidance on how to pursue these policies and some important examples from other programs around the country.

And we, right now, have in the Commercial Working Group area, we do have a number of fact sheets are available and they're on the Commercial Working Group's website.

And modest policy design guides, what we hope to do here is provide a framework and actual suggested policy language for state and local governments to consider for adopting certain important policies. And the initial policy design guides that we put together are in the benchmarking and retro-commissioning area or benchmarking and disclosure area and we are now working on the retro-commissioning policy design guide.

And what we're doing with these design guides is looking at the actual language that has been employed by jurisdictions around the country and the differences in that language annotating them with explanations of why the differences appear in the policy languages, but then to suggest what might be some model language that you can use. And I wish very much we had a tool like that back in New York when we were initially working on disclosure policies. But now we have experiences from around the country in a lot of

different areas in disclosure that I believe could just be a great resource to communities not only as they look at benchmarking and disclosure, but also these other initiatives that we're beginning to focus on.

And then the third bucket is what I refer to as expert and peer support. And the idea is that we will have people who are in the trenches available to give their experiences, their opinions on what worked, what didn't work, and if they had to do it again how might they change their approach. And these are people that are working in the same jobs and positions that we all are and can be a great resource to us.

And the idea of the SEE Action expert peer advisors, it's intended to complement the peer and expert advisors who already have been providing training and technical assistance under the DOE Energy Efficiency and Conservation Block Grant programs as well as the Technical Assistance Programs.

So these are the three bucket areas of the resources we have available. We'd love to hear other ideas or what would be useful. So when you have an opportunity at the end of the session, please provide us a comment if you have an idea on what you need to help make progress in these areas.

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I am going to bore down again in a little more detail into some of the key initiatives that I just touched on and, in particular, some of the policies and programs we are currently focused on. And, in particular, we're focusing on four priority areas right now. It's benchmarking, rating and disclosure, energy audits and retro-commissioning policies, strategic energy management programs and then as well as high-performance leasing policies.

And the first one I'll talk about is benchmarking, rating and disclosure, which is the next slide.

So what is it? Energy benchmarking, rating and disclosure policies are becoming much more common and let me try to break these types of policies down into their key components.

Benchmarking is when we apply at the building. I mean it typically involves taking an initiative or a building or a program or whatever and comparing it to another example. And when applied to buildings, energy benchmarking is the process for measuring

how efficiently a building uses energy relative to either itself over time compared to similar buildings or even compared to some model baseline and that could be a building a code or a suggested construction practice. But building energy performance in benchmarking is typically measured in terms of energy use per square foot. And it's typically also – in all cases, actually, not typically, need to be a standardized approach. So you want to have everyone using the same tool or a very similar tool when doing the benchmarking.

The rating actually means once you get the information out of the benchmarking process to facilitate comparison across buildings, you want to rate those buildings and assign them a score based upon a predetermined scale and that will take into account variations in building operating performance, climate or other factors. And one of the things you'll hear us referring to often in this presentation is one of the primary rating mechanisms, benchmarking tools used today is EPA's ENERGY STAR Portfolio Manager and it's an example of a building energy performance rating tool that assigns a 1-to-100 score for a building.

And then, lastly, a key part of this is disclosure, because it doesn't matter what you do in terms of benchmarking and rating if no one ever sees what the score is. So by making energy performance information readily available, it can help facilitate market transformation. And you want to make it available not just to building owners, but you want to make it available to tenants and prospective building purchasers or even governments in coming up with new and improved policies.

So why do we want to do this? I mean, number one, the obvious is increasing energy awareness and investment. And we're seeing from some studies that are being done so far, the California PSC recently through the IOUs in California did a survey of California IOU-administered energy-performance benchmarking in programs and found that they have substantially improved energy investment activities in buildings and just an awareness of opportunities.

These benchmarking, rating and disclosure programs have been very effective in stimulating local economies. And I've seen in some recent examples with New York City and San Francisco. And one of the things that was most impressive to me is one of the early findings coming out of the New York City Building Disclosure Initiative is that energy efficiency service companies are reporting on average a 30 percent increase in their business in

response to local benchmarking ordinances. So here is just a city ordinance in the benchmarking area, by providing more information, it's really driving substantial activity in the private sector in the energy efficiency services area.

We also believe that these practices will strengthen local real estate markets, as I mentioned.

And they're also an effective way to build public trust and confidence that we're saving taxpayer dollars and, especially, when we lead by example and just about all these initiatives involve heavy involvement in publicly-owned buildings, city-owned buildings. In fact, many of the cities, when they implement an ordinance of this type would initially begin with their own building to show that they're walking the talk and not just having the private sector jump through hoops if they're not jumping through themselves.

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I want to touch on a few examples and I want to begin with the City of Austin.

And one of the things I try to be careful about doing when reviewing these different approaches around the country is not using the term best practice, because I've found that every region of the country is unique. There are certain conditions that apply. There are certain policies and programs that these initiatives need to complement. And what may be best for one organization or one region may not be best for another. But I think that we can very readily refer to these as key examples that should be considered in developing your own benchmarks and rating and disclosure approaches.

And the City of Austin adopted their ordinance in the year 2008. It's effective this year. It actually affects not just commercial building, but also single-family and multifamily properties as well. Today, I'm just referring to the large buildings, the public and private buildings of greater than 10,000 square foot.

The key requirements are to use the ENERGY STAR Portfolio Manager. The results are disclosed to the city annually. And this is phased in over 3 years based on building size. So, initially, this year, the Austin program is for buildings larger than 75,000 square feet. Next year, it drops down to over 30,000 square feet and, 2014, buildings greater than 10,000 square feet.

And this information is then used to inform energy efficiency program policies' design. And they actually even have a penalty in place in Austin, where it's a Class C Misdemeanor if the data is not reported. So, I mean there it's both a carrot and a stick program, but the Austin program is a key example.

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The program I'm most familiar with is New York City Local Law 84, and it's part of what New York City refers to as its Greener, Greater Buildings programs, was adopted in 2009 and effective in 2011. And it applies to all public buildings greater than 10,000 square foot in both residential and non-residential private buildings of over 50,000 square foot. This initiative again uses the ENERGY STAR Portfolio Manager. There's an annual submission to the city. And there's a phase-in of the public disclosure on a city website. And public buildings went onto the website in September in 2011. Non-residential buildings go on beginning September 2012 and residential buildings beginning in September 2013. It also involves water use information, since water use in many of our cities, whether you're in Austin or you're in New York City, is critical. And that data is transferred automatically from the city to the building owners.

And we have also been working in New York City very closely with Con Edison in coming up with automated mechanisms for sharing utility information, which is a key component of an effective benchmarking initiative.

The next slide, I want to just briefly touch on San Francisco. San Francisco has an existing commercial building energy-performance ordinance adopted and effective in 2011. It's for buildings greater than 10,000 square foot. And it does not include multifamily properties.

So you can see that even though there are a lot of similarities, there's some reasons that cities approach this a little bit differently.

It requires building owners to annually file a benchmarking report that includes the EPA ENERGY STAR Performance Score as well as a California-specific energy rating and energy intensity figure. And one thing that's different about the California approach, it requires owners to complete an energy audit every five years and then to file that audit report with the city.

New York City, similar to San Francisco, has a similar energy audit requirement separate from the disclosure ordinance, but, ultimately, the audit and disclosure policies are intended to complement one another.

I think the only other things I'll mention about San Francisco, the building owners are required to provide an annual report to their tenants and the tenants, in turn, are required to provide energy use data to the building owner. And the San Francisco initiative also includes a penalty.

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Those were the examples I wanted to cover in the area of disclosure and benchmarking. And I wanted to now shift gears and speak a little bit about what we're doing in a retro-commissioning area. And I'll begin by first explaining what we mean by the term retro-commissioning.

And retro-commissioning is really a systematic process for identifying and improving what I'm gonna refer to as less than optimal energy performance in an existing building's equipment and control systems. And the idea is to make sure that existing building systems, lighting, HVAC, controls, they are working as designed and they're maintaining their optimal level of performance over time. So, in that sense, retro-commissioning is really an ongoing and continuous improvement process.

In contrast to retro-commissioning, which is looking at the overall interaction on the building energy systems, you will also hear reference made to energy assessments and energy audits. And they typically and often times are targeted to a specific building system. An example is a lighting audit.

And audits can be a one-time event, but retro-commissioning, the ongoing nature of it is what's most critical, that this becomes a regular part of operating a building.

In terms of why we do this, I mean we've found that retro-commissioning is incredibly cost-effective. Typically, paybacks are about a year, sometimes even less than a year and that the energy savings are reliable. And you're running your equipment the way it was meant to be operated and savings have been identified and realized in the range of 10 to 20 percent typically and sometimes even much more than that where it's been evaluated. It minimizes the risk of big surprises in terms of

equipment failure, because you're constantly aware of how your equipment is operating.

And, again, as with disclosure, we're reducing the cost of operating our buildings. We're reducing taxpayer dollars, especially when we're talking about public buildings and demonstrating that we're making the best use of taxpayer dollars.

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Several other key examples and, again, going to some of the same cities referred to before.

New York City Local Law 87 was adopted in 2009 and it will become effective next year in 2013.

It requires affected buildings to undergo an energy audit and retro-commissioning every 10 years. Even though the objective here is that retro-commissioning is ongoing, at the heart of the New York Local Law is that it would make retro-commissioning just a common practice used by building owners and managers.

And for the New York programs, right now, it's for public and private buildings greater than 50,000 square foot.

There are minimum audit requirements put in place to meet currently accepted ASHRAE standards. It involves all face building system, building envelope, HVAC, hot water, electrical and lighting.

And it also puts in place certification requirements for those who are actually doing the auditing and the retro-commissioning. So it's actually helping us – not only energy efficiency, but it's helping us, we're finding, in the jobs area in creating a demand for this type of service among the professional.

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City of San Francisco also has a retro-commissioning program in place. It's the affected properties include buildings that are 10,000 square foot or higher.

New York has every ten years disclosure of the energy audit results. San Francisco is every five years. The city will post aggregate findings online. And they also have minimum years of experience and certification requirements.

One key element of the San Francisco program is that building owners have to report on compliance and the audit result to the city and this includes – they actually, on the building owners' report, a list of the retro-commissioning and retrofit measures with a payback of three years or less.

Now, New York doesn't have that same requirement, but you can see there are a lot of similarities across these ordinances. The similarities, I believe, are very helpful to other cities in thinking through, okay, understanding why certain deviations from standard – well, referred to as a standard practice were made and what is best in your particular situation.

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The third area I was gonna touch on is strategic energy management and strategic energy management is really what we refer to here as a holistic approach to energy management that's setting long-term goals and monitors your progress at achieving those goals not just on the building level, but on an organizational level.

Cities, as an example, own an incredible number of buildings. I mean New York City, which I refer to often, over 4500 publicly-owned buildings. And it's critical that large cities and small cities look at how they're doing an organizational level, to have goals in place and to have specific targets and, most importantly, holding not just people but buildings accountable for performance.

So strategic energy management, we believe, is critical for achieving energy efficiency in a large scale in large organizations. And we have a lot of great examples out there emerging around the country in both the public sector and the private sector on how organizations can do a better job in terms of strategic energy management.

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One of the examples that I want to reference is Arlington County, Virginia, which we refer to as the Fresh Air Program and its effect to all county-owned buildings and it identifies energy management as a principal strategy for achieving greenhouse gas reduction. And it integrates benchmarking and, again, they're using Portfolio Manager and energy audits to help prioritize energy efficiency investment not just within individual buildings, but across the

whole fleet of buildings. They also then couple this information to help them develop and establish performance contracts and dedicated funding from local utility taxes as well as to help try to identify particular energy efficiency and renewable energy projects that make sense. This program in Arlington County includes energy performance disclosure online and also through building labels and it intends to get the private sector enthusiastic and active in using building labels.

So it's one way that – and I think the last thing I'll say about this is that it becomes a local community energy priority and challenge. And a big part of this program is leading by example and encouraging the private sector to follow suit not just in the energy area, but also in being more efficient in the use of water as well as waste.

The last area I wanted to touch on, actually, this is the second to last area, is ratepayer-funded programs. The remainder of my presentation, I'm gonna discuss ratepayer-funded initiatives as well as high-performance leasing.

And the two examples I want to use for ratepayer-funded initiatives are – first of all, the first one out of New Jersey referred to as The Clean Energy Program, where customers are actually paid for performance again focusing on large building, large existing building over 50,000 square feet. And the idea here is that it includes commercial, industrial, multifamily buildings with peak demands of more than 100 KW. So they're going after the largest buildings first. They're using targeted marketing of retail chains and health care organizations and also using technical assistance to try to get these large customers involved in the program with the first-year objective of being a 15 percent energy savings goal among the participants. It's a performance-based program. It's using ratepayer funds. It complements the other initiatives, but it's the idea of a state-wide initiative funded through utility ratepayers.

The other ratepayer-funded program that I want to mention is the next one, next slide, is Wisconsin's, what they refer to as, Focus on Energy. This is for existing buildings only and it's targeted at commercial retail buildings. And under this initiative, large retailers are recruited to develop energy management plans and then to document their energy savings. The idea of this program, at the heart of it, is really using contractors to provide one-on-one technical assistance in developing energy management plans for these large retailer customers. And it involves retro-commissioning. It involves doing intensive audits. And, lastly, it

provides recognition to those customers, who are really achieving the greatest performance and the greatest improvement in terms of energy efficiency of their building. So it's not only providing assistance financially, but also providing encouragement to those who are leading by example.

The last area I'm gonna touch on that the group is focusing on at least initially with high priority is high-performance leasing. And this really refers to strategies to try to overcome the barriers between owners and tenants that are holding back energy efficiency in commercial buildings. And high-performance leasing, which is what we're referring to, is really it's a subset of green leasing and it encompasses coming up with documents and practices to reduce the environmental impact of leased buildings. And it goes beyond just energy. It's we're trying to reduce consumption of water use, transportation alternatives, purchasing and waste.

And the example that I'm using here, and it's the next slide, is New York City has a model energy lease program. Actually, it's a suggested leasing language that is available for consideration by other communities, but it was adopted in 2011. The initial application of this lease was World Trade Center Building Number 7, where there is a lease that actually directly takes on that the split-incentive problem between building owners and tenants. So I mean the lease is designed in a way that the building owner now has an incentive to make the building as efficient as possible as do the tenants.

The key requirements are this that, at least under the New York model, is a tenant will pay zero percent of the upfront cost, but they receive 20 percent of the energy cost savings immediately. And after the landlord recovers 100 percent of their investment in the project, the tenant gets 100 percent of the future energy savings. So it provides the landlord with an incentive to pay for all of the upfront cost. The landlord is then paid back minus any financing costs. And then, ultimately, the tenant will receive 100 percent of the savings.

So we believe that this is an effective approach for getting at a problem that has just been a perennial problem not just in large cities across the country in terms of the barrier to investing in buildings where there's a split incentive between building owner and tenant.

That was probably a long-winded overview of the programs that are underway now. But at this point, I will turn it back to Andrew, I believe.

Andrew:

Yep. Absolutely. And thank you, Jim.

And we just wanted to remind everybody – and you'll see this slide again at the end of the presentation – that there are a number of options and mechanisms through which local governments can get involved with the SEE Action Network including going directly to the SEE Action Network website or getting in touch with us directly. Like I said, you'll see this slide again and all these links and e-mail addresses will be provided to you.

So, with that, I wanted to say thank you to Jim for giving a really comprehensive overview of the SEE Action Network and the efforts being pursued by the Commercial Buildings Working Group.

As Jim noted, those are the four priority policy areas and those are just a few of the examples that are currently in place across the country in various jurisdictions to show you that in fact these efforts are in place at this moment across the country.

And as we'll mention again, there will be further webcasts throughout this summer focusing in in more detail on each one of those priority policy areas.

But with that, we'd like to take a few minutes to talk with Alex Dews, who is the policy and program manager of the Mayor's Office of Sustainability in Philadelphia, Pennsylvania. And he's going to give us sort of a city's point of view on their work attempting to implement policies to drive energy efficiency in commercial buildings.

With that, I will turn it over to Alex and let him say a few more words of introduction about himself and move forward. Alex?

Alex Dews:

Great, great. Thanks so much. I'm really happy to be able to participate this afternoon and to talk a little bit about what we're doing. I hope that it doesn't sound too repetitive. There are a number of things that we're working on either planning or are currently doing that were already mentioned on the call, but I guess that's a good thing. It shows that a lot of cities are taking the same steps and finding ways to combat challenges that seem to be common everywhere with respect to commercial energy efficiency.

So my name is Alex Dews. I'm the policy and program manager here in the Mayor's Office of Sustainability and I wanted to give a little bit of a background on what the Mayor's Office of Sustainability is all about here in Philly, what we've been up to.

And so if we can go to the next slide.

Greenworks Philadelphia is the sustainability plan in Philly and it was launched in 2009. And so we've just completed three years of implementation. And I'll come back to that in just a second. But we're at kind of a unique moment in the city in that we have a number of different sustainability efforts underway, planning efforts that touch on a lot of different parts of government and the private sector, many of which do relate directly to energy efficiency and the commercial energy efficiency efforts that are underway.

So we have zoning and planning efforts that have – for the first time in many, many decades, the zoning code has been redone and the comprehensive plan for the city, which shapes new development as well as existing retrofits to buildings for a long time to come.

So those things happening in concert with things like our Green City Clean Waters Plan, which looks at storm water infrastructure from a sustainable perspective rather than just traditional gray infrastructure as well as the Green 2015 Plan, which adds 500 acres of new open space through our parks and rec. department.

All of those things are happening together. There's a lot of opportunity for interaction between all of the city staff that are working on those things and that's really helped us in the Office of Sustainability to drive all of the initiatives and goals in the Greenworks plan.

So, as I said, Greenworks was launched in 2009. Mayor Nutter, when he was campaigning for office, said that he was gonna make sustainability a big part of his administration and followed through by appointing the first sustainability director as soon as he took office. And so that plan came out in 2009. And we just last – earlier this week, sorry, released our update to the Greenworks plan, the 2012 Update and Progress Report.

And the structure of the plan is that it looks at sustainability through the five goals of energy – environment, equity, economy and engagement. And we've had a lot of successes across the portfolio. 89 percent of our goals – our initiatives, sorry, are either complete or underway at present and we've made a lot of headway particularly on some of our energy goals. And a lot of those goals are focused on government, but also many of them are focused on private sector both residential and commercial.

So the second target of the plan specifically is focused on 10 percent reduction in building energy use for the entire city. And this was the first year where we've been able to actually measure against the baseline and get comparable datasets for all of the energy use that we needed to measure. And while we were able to report a decrease in energy use in municipal buildings, we were not able to do the same for the city at large and actually saw an increase. So we do have a lot more work to do. We do have some bright spots in that we have a lot more ENERGY STAR certified and LEED certified buildings than we did a few years ago. But, clearly, as the usage keeps going up, there are still a lot of challenges ahead of us.

So next slide, please.

So Philly is a city, like many others on the East Coast, that has a lot of challenges in that its building stock is old and has a huge opportunity to increase the efficiency of its building stock especially on the commercial side. So, in addition to the Office of Sustainability, we have a lot of private sector partners. And about a year and a half ago, the creation of the Energy Efficient Buildings Hub down at the Navy yard in South Philadelphia has emerged as a really important partner in driving energy efficiency demand in Philadelphia.

So a report that came out from the energy efficient hub last fall indicates that 77 percent of commercial buildings in Philadelphia and in the region are good candidates for energy retrofit.

So together with all of those partners, we're focused now on how to achieve significant growth of the energy efficient sector to tackle that problem of the 77 percent of buildings that are good candidates for retrofit and there are a number of different efforts underway to do that right now.

So I mentioned before that we have the 10 percent reduction goal for city-wide building energy use in Philadelphia. We also have a

30 percent reduction goal specifically for municipal buildings. And, as I said before, we're doing a little bit better on the municipal side than we are on the rest of the city. And 5 percent reduction over the last couple of years on municipal, but we are 13 percent increase in city-wide energy use. And we've seen the majority of that increase come from the commercial sector, particularly in increased use of natural gas.

So a lot of factors that play there, but clearly the price of natural gas being at historic lows is not helping encourage a lot of building owners to take on retrofits, because, as was mentioned before, two percent or less of their overall expenditure is on energy. So we've had to think creatively about ways to make inroads there.

So we know that the buildings overall in Philadelphia represent about 61 percent of greenhouse gas emissions. And the commercial sector is responsible for 57 percent of the building energy use in Philadelphia.

So financing and technical assistance are two of the best things we have going in terms of getting the commercial sector to take on energy efficiency in a serious way.

And EnergyWorks is probably the best example of this. It was launched about a year and a half ago and it's an EECBG-funded program for both residential and commercial buildings.

And the commercial component of the fund has loaned over \$10 million to several different projects through the spring of this year. One example of that is the hotel new construction project, but there are also a number of smaller retrofit projects across the city and the region that have received funding through this program to do things like energy modeling and also support upgrades of equipment.

And those loans range from \$100,000.00 to \$2.5 million plus in the commercial sector. And then on the residential side, it's much smaller loan amounts, but competitive financing.

And we've found that on both commercial and residential, the fact that we've been able to put all of the components of going through the energy efficiency project in one place makes a huge difference. So by being able to call one phone number and get an energy audit for a building and then be connected to below market rate financing and then also have a third-party quality assurance check

at the end of the process, many more building owners have been interested and willing to take this on.

Of course, in this economic climate, as long as there is debt involved, taking on additional debt, it's a little bit of a more difficult argument, but the program has continued to grow in the last couple of years.

Next slide, please.

So one other program that's been up and running for a couple of years now is the Greenworks Rebate Program, which offers rebates of up to 50 percent of project costs up to \$10,000.00 to small businesses and that includes commercial, non-profit, multifamily residential and industrial entities. And the criteria is that the recipients must achieve a 25 percent reduction in energy consumption.

So, to date, there have been a lot of great success stories in that program including lighting retrofits in a lot of retail locations including a jewelry store, complete systems overhaul in a manufacturing facility, window replacements in a historic hotel facility and a couple of complete renovations of buildings to – the photo that you see there is a building that was renovated to the LEED Platinum Standard using some funding from the Greenworks Rebate Program.

So, in addition to that, we also do encourage and support participation in the local electric utility, PECO, in their rebate program as well as the Philadelphia Gas Works, which is the municipally-owned gas utilities programs, and those are offered both again to residential and commercial customers. But, in particular, the gas company has a number of newer programs geared specifically towards commercial entities in particular, combined heat and power incentives as well as just some equipment upgrade incentives that they've really started to push out and market more.

And it's been a good challenge, but also we think it's an opportunity to help folks understand that there are a whole suite of options available to them. Not any one of these is perfect for every single customer. But if you're willing to spend a little bit of time thinking about what the best option is for your building, there is probably something that's going to be helpful for you among all of those options.

Next slide, please.

So when we talk about driving demand, obviously, these incentive programs are really helpful, but I think that, as has been explained already, benchmarking and reporting is a huge, huge opportunity.

And I was telling some folks as the call started that just about an hour ago, our city council voted on its final session of the year to pass a commercial benchmarking and disclosure ordinance, which will take effect beginning one year from today.

So we've been working for about a year and a half on getting that passed and working really closely with a lot of our peers in government that have already passed similar ordinances. And ours is modeled pretty closely on the New York policy with a couple of exceptions, but it does require that large buildings, commercial buildings over 50,000 square feet annual benchmark and disclose building energy and water use.

And, of course, we did, as part of that, also commit as the city government to benchmark all of our facilities over 10,000 square feet. That's currently underway. We have just under 200 buildings that are at that size. And once we complete that round, we'll publish a report on that and then move onto the smaller facilities under 10,000 square feet.

But based on the experiences in other cities, we felt that 50,000 square feet was the most appropriate size threshold given our real estate market here in Philadelphia. And that's a little bit over 2,000 buildings that we're talking about here in Philly.

So we worked really closely with a lot of partners on this to figure out what the best fit was going to be and taking best practices from a lot of the other policies that we've seen around the country.

And, as you can see on this slide, we formed with the help of our local Green Building Council and some environmental advocates, we formed something called the Coalition for an Energy Efficient Philadelphia. And I think that was a really effective means of getting a lot of business owners and building owners onboard and helping them to understand not only what Portfolio Manager is and how it works, but what the benefits of requiring benchmarking for the whole city can be in terms of making the city's building stock more competitive and helping building owners and tenants save money and keep some of that money in the local economy.

Because when you start to talk about the numbers, it is the same everywhere, but we have some specific data for Philadelphia that shows that the percentage of energy being wasted is as high as 30 percent in a lot of commercial facilities. So the argument was made much stronger by bringing on a lot of the commercial building operators.

And it did take a while to get the city council and everyone onboard to get the bill passed, but we're really excited to move forward with implementation on that and think that we're gonna see some really interesting outcomes.

And we do know already that there are a number of commercial facilities that are doing this and feel like it's a good thing. But we are encouraged by the number of building owners who have said this is something we want to take advantage of. And we want to learn not just about how we stack up against other buildings, but we want to take that and then figure out what the best opportunities are from there to take advantage of existing programs and help design additional incentive and rebate programs that the city can help promote to drive energy efficiency at a larger scale.

Next slide, please. I'm sorry. A couple more points on the previous one if you can go back quickly. Thanks. Sorry about that.

So we talked a little bit about ratepayer-funded programs previously and the public-private partnerships that we've formed in putting together the Coalition for an Energy Efficient Philadelphia.

One other quick example I wanted to reference is something we did about a year and a half ago in Philadelphia when we passed the Cool Roof bill that requires all new construction and major renovation of existing buildings to install cool roofs. This is a policy that we've seen in a lot of other cities.

But we were able to do a city-wide competition along with the launch of that piece of legislation. All blocks in Philadelphia were invited to apply and we had many thousands of residents applied for the program. So by pairing this competition where the winning block got a cool roof coating for the entire block, we were able to get a lot more media attention and interest and buy-in in what we were trying to do with cool roofs than if we had just had the piece of legislation on its own. And we partnered with Dow Chemical Company to bring that competition to Philly.

And it's been a really big success. We were pleased to have the roofers union come out and support and testify in support of cool roof technology and we've been able to monitor the impact of cool roofs on the neighborhood scale, because we were able to do installations on an entire city block rather than just one-offs on properties.

So that's the kind of public-private partnership that we'd like to be able to replicate going forward to do things at scale and to show that we really do have shared objectives with some of these private sector companies.

I wanted to talk quickly about strategic energy management and, particularly, what we've been doing over the last couple years in government.

We, historically, have had an energy office in Philadelphia that has grown to five, six, seven employees during the late '70s and early '80s when energy was a focus at the municipal level and then it virtually disappeared over the last 10 years. And we've been building that back up over the last couple of years and have put in place, over about the last 18 months, an energy management database.

So, previously, we were managing many hundreds of accounts all paying them off of paper bills, have very little opportunity to do a strategic analysis of where our best opportunities were for savings.

So, after having this in place, we've been able to share energy usage reporting with facilities managers across the city. The next step there is to try to tie some incentives to energy performance. But as all of the utility bills are paid centrally, that presents a little bit of a challenge. And we understand that that's a challenge faced by a lot of city governments.

But we've still seen some really impressive results just by sharing information with facilities managers that – if you can help somebody understand that their fire station is spending twice as much on energy as the neighboring fire station that's exactly the same size and use profile, people start to get competitive and start to care about it even when there is no carrot or stick mechanism in place. So we're gonna continue to push out those reports to all of our facilities managers.

And we also have focused on preventative maintenance as a new way to achieve some energy efficiency in our buildings.

And just a quick note back on the benchmarking is that some of the pushback we got from the commercial sector was that they felt that folks were gonna be penalized for having low ENERGY STAR scores on buildings that had not been invested in for quite a while. And we were able to make the point that since we're publicly disclosing all of our city facilities, they will not be alone. There are many of our facilities which are not going to score well at all, but we think that it's an important thing for the market to understand on the commercial side and for taxpayers to understand that we do need to invest in this infrastructure of these buildings. They're old. They're not going anywhere. They're costing us a lot more money to operate than they should.

And so that all ties into our strategic energy management and, as I mentioned before, we're at 5 percent reduction towards our 30 percent goal. So we do have a ways to go, but it's taken us a few years to get systems in place to start to chip away at that 30 percent number. And some large-scale projects that are moving from planning into construction now will help us take out some larger chunks of that.

So in terms of building the workforce, I think that the EnergyWorks program that I talked about previously has provided a lot of job training opportunities in energy efficiency and sustainable construction techniques and that's something that we're excited to be able to do and partner with a lot of educational providers on. And when you talk about building a market regionally, it's really important to be able to provide that capacity and to provide not just the training, but the placement. And we've seen some great success with that, primarily on the residential side, but also supported through the commercial component of EnergyWorks as well.

And then on moving the market, we have had the opportunity to pilot a lot of interesting technologies in city facilities. A couple of examples of that, obviously, we have some solar installation through our water department.

In addition to that, we also for the first time have been able to pilot with a company called NovaThermal, a technology that's essentially a geothermal use of sewage facilities. So they're actually also tied with the Philadelphia Water Department. And that was funded in part through a program, the Greenworks Pilot Energy Technology Program, which is also EECBG funded. So that's one example of a way that we've been able to bring business

here to Philadelphia to support the growth of their business in piloting a technology that has been used widely in Asia, but this is the first such example of its use in the U.S.

And so Water Department has, on the renewable energy side, with solar as well as now this geothermal technology and also a biogas facility have really been a way that we've been able to pilot some technologies and show a proof of concept to the private sector and play the leadership role that we feel responsibility to do as the implementers of the Greenworks Sustainability Plan for the City of Philadelphia.

Next slide.

So we are new members of SEE Action and it's a great opportunity for us. Everything that was covered on the call already, these are all things that we are either working on or working towards. And it's a really great opportunity for us to get to talk with all of our colleagues in other cities and in the private sector around the country about what they're working on.

And we've had the opportunity just since joining to be able to participate in developing some of the materials. For example, the benchmarking guidance document and that's something that having just gone through the process of putting together a policy without having that kind of guidance document, I can say it's hugely helpful to be able to not just have the document in front of you for reference, but to also have access to the folks in other cities who have already worked on these kinds of policies. And just to have that readily available is a huge difference maker.

So we're really excited to be onboard with SEE Action and look forward to working with all of you going forward.

Andrew: All right. Well, thank you, Alex. We really appreciate you giving that overview.

I am looking to see if there are any questions that have come in for Alex specifically. There was one question as to whether Philadelphia, at some point, would be able to share data on the energy performance of the buildings in the city so that other cities could compare their performance against that?

Alex Dews: Sure. You want me to take that right now?

Andrew: Yeah. Why don't we just take it right now, since it's –

Alex Dews: Okay. Sure. Yeah. So I think I may have skipped over it, but the way that our policy is structured is that benchmarking reports are due one year from today, so June of 2013 is the first date that all the buildings, who are covered under the definition 50,000 square feet and greater commercial buildings, have to report. And then there is an additional year built in before public disclosure first happens. And that follows the New York model as well as a couple of other cities.

And the reason for that is to give us a chance as the implementers, a little bit of time to get our system in order to make sure that we're tracking everything appropriately and that we're giving also the building owners some time to make sure that they are inputting accurate information.

But, absolutely, yeah, by 2014, we'll have all of that publicly available online. And we're excited to be able to do that. And, as was mentioned before, we think that benchmarking without disclosure really doesn't serve as much of a purpose in terms of educating the market about energy efficiency. And we're excited to see – a little bit nervous, but also excited to see how our buildings in aggregate stack up against other cities and to see where our biggest opportunities are.

Andrew: Great. Thanks, Alex. And if there are any further questions for Alex, we can address them. We can try to get to them at the end of this session. I know there were a few other questions that came in.

But I do want to take a few moments just to introduce Cody Taylor, who is the DOE lead for the SEE Action Network Existing Commercial Buildings Working Group, to just say a few words about some related DOE initiatives that are going on right now and that may tie in with the SEE Action initiatives. Cody?

Cody Taylor: Great. Thanks, Alex. Again, my name is Cody Taylor. I'm here in the Building Technologies Program at the Department of Energy. And we're glad to be supporting SEE Action as part of the federal participation in it.

And I'll mention, of course, the first thing that we think SEE Action can do that's useful for state and local governments are those information resources that Jim mentioned earlier and Alex alluded to just now in terms of the policy design guide for benchmarking and disclosure policies that the SEE Action group just put out in the last month or so and the fact sheets on a number

of other approaches that can be taken as well. And so those fact sheets themselves have both description at a high level that can be useful for elected officials in your city to understand the basics of some of the approaches, but they also have a lot of details with rich information that can be useful for staff who are trying to track down how would we actually do this in our own jurisdiction.

And so those are the first things that I want to remind you of. And you can find those by going to the website that is at the bottom of the screen on many of these slides, that's seeaction.energy.gov and going to the Existing Commercial Buildings Working Group page.

And so if you want to flip to the next slide.

There are a few other things as well that we're undertaking here at DOE specifically and that we think are things that can be very helpful in this area, we hope, to local governments and state governments.

The first I'll mention is the SEED Platform or Standard Energy Efficiency Data Platform. And this is something that DOE is creating as a software tool for state and local governments to have their own database in which to store information about building energy performance to store it in a standard way and to share data out with other parties as needed.

So we've been working with each of the cities that does have a benchmarking and disclosure ordinance in place to help them use this as one standard way to store that data, so that if and when, depending on the jurisdiction, they're ready to make part of that data public and that it's going to be public in the same format from one jurisdiction to another.

And this is something that we think is really important, because knowing that it's gonna be out there in the same format is what allows innovation in the private sector where software designers and service providers can rely upon getting that information from any city who's got this kind of policy in place and know that it will be easy to digest for them in their own software tools, because it will be in a standard format.

And so that's something that we've worked hard on. We think it also makes life a lot easier for cities who are implementing a policy like this or states who are considering implementing a policy like this. We're also working with the two states that have benchmarking disclosure policies. And it makes life much easier

in terms of having a place to store the data and manage it once it comes out of Portfolio Manager for the tens or hundreds or thousands of buildings that are reporting depending on your jurisdiction.

And so this is something that is in beta right now. It's in use, as I mentioned, in a number of different cities. The District of Columbia, New York City, San Francisco, Seattle, Austin and a couple states are all testing this in its beta form right now and giving us feedback on what they need and we're making improvements today to make it as useful as possible.

If it's something that you think would be useful either because you're considering similar legislation or just because you need a way to manage data from your other energy programs, data that – this platform links with Portfolio Manager and it can ingest other kinds of data as well, so I encourage you to get in touch with me at the Department of Energy if this is something that is useful to you and we're happy to start including you in the user group and giving you access.

Go ahead to the next slide, please.

And while we're doing that, I also should have mentioned on the SEE Action resources that you can sign up for news alerts from SEE Action on the homepage. That's again at the bottom of your screen there, seeaction.energy.gov. And so those can give you announcements of things like the policy design guide that we just published so that you'll have the first heads-up when anything new comes out.

So another area I want to mention that we're working in federally that we think can be of help to you is on the data access front. So a couple things we're doing.

One is this map you see here, which is online at the link below on openei.org and this is a map that we've developed of access to utility data and how much access customers have to different kinds of utility data in different jurisdictions and around the country. And this can be helpful, because it lets you see if the utilities where you're located give customers access only through paper bills or if they have online access. And if they have online access, is it just a plain old PDF or can they actually get rich data in a format that can be used by some of the software vendors out there? So this is something we had – we just launched this in the last month or so.

And, as you can see, there's about 20 percent coverage of the country in terms of the utilities who have put their information in there. So if you sign on there and look at your location and see that the utility has not reported yet, you can encourage them to do so, so that that information is available.

And you can also, of course, see where utilities have some of the best practices in terms of customer access to data, so that utility customers, whether residential or commercial, can actually get a hold of their data in a way that's useful to them and a way that's useful to your energy efficiency programs. So we hope this can be a tool that you can use to encourage that.

Other related initiative I'll mention is the Green Button. You've probably heard about it. And that is a standard data format for utilities to make that data available to their customers. And I believe it's been adopted by or committed to by utilities in 9 different states so far. I think there are about 17 large utilities at this point. And that, again, is something that by having a standard makes it easier for software vendors to offer meaningful – turn that broad data into meaningful information that is actionable for customers out there and helps people improve efficiency.

So if you want to flip to the next slide.

Another initiative that we have in this area is the design of a Commercial Building Asset Rating Program and there's also a residential version of this that we call the Home Energy Score.

For those of you who are familiar with the Portfolio Manager tool that was mentioned earlier for benchmarking building energy performance, Portfolio Manager is very helpful at the overall building level and it's something that we at DOE support as well.

And this asset rating is a complementary tool that we're developing to help give deeper understanding into buildings at a low cost.

So the Portfolio Manager benchmarking tool is often used to look at a collection of buildings and get some sense of which of those buildings may be poor energy performers and worth attention to their energy performance to try to improve it and likely to yield savings and pay for themselves. And it doesn't give you a lot of insight into what needs to be done from one building to the next.

So the Energy Asset Rating tool is something that we're developing again as a complement as a low-cost way for building owners, whether those be public-sector buildings or private-sector buildings, to have a method to quickly determine what some of the best opportunities are in their building for improving efficiency.

Flip one more slide. Oh, I'm sorry.

On the Commercial Building Asset Rating Program, it's currently in pilot. We're just beginning a pilot right now. And if you're interested in participating and adding any buildings to the pilot of your own city buildings or state buildings or if you think that there are private-sector building owners in your jurisdiction who might be interested in this, you can encourage them to visit that website below and sign up for the pilot there.

So next slide, please.

The last thing I'll mention in terms of DOE initiatives in this area is the Buildings Performance Database and this is a national anonymous database of both building energy usage information and building description information, that is the assets and operations of the building, that we're creating here at DOE.

And the reason we're doing that is because we've heard from the finance sector that they're eager to invest in energy efficiency and, in fact, there are many large banks who would like to be putting money into this area, but the problem they face is that they don't have the kind of large dataset that they use to make decisions on investments at that scale. And so what they need to see is a large dataset of real empirical data that can help them understand what the savings are from particular energy efficiency actions that you can take in a building.

And so we're trying to assemble a database like this to facilitate investment and to facilitate a number of other things such as improved benchmarks for buildings and improved program targeting and things like that.

So, again, this is a national database we're building. We think it can be useful to program managers as well as financing.

And it's something that we're currently seeking more data to add to the database. So if that's something that is of interest to you and you're running an energy efficiency program now and could conceive of contributing your data to that and being able to get

useful information back out of it about ways to better target those programs in the future or improve understanding of what works and what's not working, we welcome your participation in this as well.

So it's currently in a closed beta, the database, so we're not opening it up to the public just yet. But if you're interested in adding data to it, I would love to talk with you about that. You can find more information at the website there at the top. And feel free to contact me directly if you'd like to discuss more.

So, with that, just a couple last words about how to get involved in SEE Action. I think you've heard it mentioned several times now, but there are a number of resources available that SEE Action has developed so far both on the commercial building side and in a number of other areas. You can see them at the link above there.

And we're always interested in hearing what other jurisdictions are doing, state and local governments, what you're doing in this area. So please do feel free to get in touch. This is the kind of information that helps us help you share with each other so that everyone is aware of what the best practices are in this area.

I mentioned sharing your data. That's something that's always helpful with us in terms of using the SEED Platform as a beta user or contributing your data to the national database or becoming a pilot participant in the Asset Rating and how that can help you identify energy efficiency opportunities in your buildings. So, please, feel free to get in touch about that.

And feel free to get in touch with us about what we can do to help you around providing technical resources or materials or guidance in this area. If there are problems you're facing and you're trying to do any of the kinds of things you heard Alex talk about or you heard Jim talk about earlier – we want to help you be successful with your policies and programs. And we can tap folks who have been successful and have faced the same challenges that you're facing. So get in touch with us and we can see what we can do to help you.

So thank you for your attention today. I appreciate you being with us. And I just want to also give you a heads-up about a couple additional SEE Action webcasts that will be coming over the next few months. We will be doing deeper dives into some of the particular areas that you heard about from Jim and from Alex.

We'll have a session that is specifically focused on energy performance benchmarking and disclosure policies and how that approach is being used around the country and what some of the challenges are and how jurisdictions are overcoming those challenges and making it a useful policy. And we'll do the same around energy audit and retro-commissioning policies that you heard about as well as the strategic energy management program approach to sort of long-term engagement around energy efficiency and, finally, the same around high-performance leasing strategies.

So I know that all of these are of different interest to different folks out there, so please do think about joining especially for the ones that you think could be particularly effective in your community. And feel free to reach out to us as well if there are other things in this vein that may be of interest to you in a future webcast.

Andrew:

All right. Well, thank you, Cody. And thank you to everybody who took the time out of their afternoon to join us today. It has been a pretty full slate. We are right at or just a little bit over time.

I know that there were a handful of questions that came in. I think there were one or two specifically on energy-aligned leasing clauses that actually we may need to look into a little bit more before we get back to you. But if you did send in a question and we were not able to get to it, we will respond to you offline.

One question was whether the slides will be made available after the presentation and we can send those out. It'll probably a day or two, but we can make sure that everybody gets a copy of these slides with all the links.

The recording, the slides, the PDF of the slides themselves and a transcript of the webcast will be available on the DOE Solution Center at some point in the near future, so you will have access to all these materials.

I think we can leave the web platform open for a little while longer just to allow anybody who has any last questions to type them in. We'll gather them and we'll be sure to get back to you.

But I think in the meantime, we will go ahead and close down the audio line. I wanted to say a thank you again to all of our presenters today, to Jim, to Alex, Cody, Molly and everybody who helped put this together and a special thanks to all the attendees who took time out of their day to join us.

We do hope that we will see you on future webcasts a little bit later on this summer. And we'll make sure to get the dates, times and login information to you as soon as it's nailed down.

So thanks so much. Feel free to add any last minute questions into the Q&A panel if you'd like. And we look forward to working with you in the near future.

Have a great day everyone.

[End of Audio]