

# Energy Efficiency in Municipal Operations

Presented by U.S. EPA's Local Climate & Energy Webcast Series

Webcast Transcript

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# **EPA State and Local Climate and Energy Program Overview**

Slide 1: Introduction Slide

Slide 2: Title Slide

Emma Zinsmeister: Great. Thank you to everyone for joining us this afternoon for the next installment of USEPA's Local Climate and Energy Webcast series.

Today, we're going to be talking about energy efficiency and municipal operations in ways that local government can improve the efficiency of their building.

Slide 3: Webcast Agenda

Emma Zinsmeister: For today's Webcast, we will be starting off with a brief introduction. My name is Emma Zinsmeister and I'll be presenting a little bit of information about the USEPA Local Climate Change – Local Climate and Energy Program and some of the resources we have to offer that will help you and to pursue energy efficiency in your local government building.

We'll then move into a presentation from Kudret Utebay to talk a little bit about Energy Star resources and tools and provide some examples of how some of their partners have used those resources as they've improved the efficiency of their building.

We'll then have a couple of examples from some of the EPA's Climate Showcase Communities Grant recipients. We'll have (Tony O'Donnell) and (Randy Solomon) talking about a project in New Jersey working with local communities there and then we'll hear from Emily Barrett in the town of Cary, North Carolina, about a project that's working to improve efficiency in their emergency services building including fire departments and police stations.

And at the end of today's Webcast, we'll have an open question and answer session for all of the speakers and I will provide some information in just a minute on how to submit your questions.

Slide 4: GoTo Webinar Software Logistics

Emma Zinsmeister: And some logistics about using the Go To Meeting software for today's presentation, as was mentioned by the operator, all of your participant lines have been placed on mute. So you will need to submit your questions in writing and the next slide will give a screenshot of how to do that.

You should have received .pdf copies of the presentation via email today if you registered in advance, but we will be posting copies of those files as well as an audio recording on our Website in the next few weeks after the Webcast. And the first Web link here is where you can go to retrieve those files.

And then if you have any technical difficulties with the Go To Meeting software during the course of the Webcast, Lauren Pederson is on the line to provide technical support and you can contact her at the email address below for assistance if you need it.

#### Slide 5: Questions (Go To Meeting)

Emma Zinsmeister: So if you have questions for any of the speakers during the course of the Webcast today, the way in which you can submit those is by using the question pane in your Go To Meeting control panel.

So you'll type in your questions and please include the name of the presenter that you would like to have answer your questions. We will be compiling those and then at the end of the Webcast reading through them and we will – this way we have a written log of all the questions in case by chance we run out of time we can send those questions to the presenters and then post a .pdf of responses on our Website after so that we can get to all of your questions.

#### Slide 6: Optional Feedback (Go To Meeting)

Emma Zinsmeister: And then at the end of the Webinar today when you go to close out the Go-To Meeting software, a pop-up window will appear with a few optional survey questions to get some of your feedback on what you think of the Webcast today and what you're interested in hearing about for future topics.

So I greatly encourage you to take a few seconds and provide your input. We use this as we decide and plan the Webcast series through the course of the next year. So please do take a few minutes to do that. We appreciate your feedback.

#### Slide 7: U.S. EPA Local Climate and Energy Program: Goals

Emma Zinsmeister: And so just to kick things off, I want to provide a little bit of background information about our program here. At EPA, the Local Climate and Energy Program, provides technical assistance to communities to help them reduce greenhouse gas emissions while also achieving a variety of other sustainability goals that you may have in line with your local priorities.

So we do that by providing resources and connections to other programs, the EPA, other federal programs that have resources to offer, documents, guidance materials, other resources ultimately to help understand the benefits of pursuing clean energy strategies, energy efficiency and renewable energy to reduce greenhouse gas emissions that may include things, like, improving your air quality, saving money and energy, improving public health and general quality of life of residents in your communities.

#### Slide 8: U.S. EPA Local Climate and Energy Program: What We Offer

Emma Zinsmeister: Here's just a list of where you can access some of the resources that we have to offer.

Our Website provides a comprehensive overview of different strategies for climate and energy projects and I have another slide in just a moment to show you in more detail what's on there.

Also, we have our local climate and energy strategy guide series which is a series of documents that covers in more detail a variety of the topics that may be of interest to you as you go about pursuing energy efficiency, renewable energy, transportation strategies or waste management and community design strategies to help improve the sustainability of your communities.

And then, of course, you can hear about upcoming resources, Webcasts and funding opportunities through our state and local climate and energy listserv. So I certainly encourage anyone who's not already registered for the listserv to sign up using that last link under informational resources.

And then, of course, we offer information exchange opportunities like our Webcast today. That link there will just take you to a list of all of our upcoming and past Webcasts where you can access files of presentations, any background papers that we post and, of course, podcast files so you can listen to Webcasts after they've occurred if you're not able to attend when they're live.

And also, you can share those with your colleagues if you find, you know, there are other folks that may be interested.

And then, of course, our Climate Showcase Communities Program, which I mentioned a couple of our speakers today are representing communities that received grants.

We have profiles of all of the communities that received grants as well as updates on their projects and a lot of multimedia pictures and videos of the work that they're doing on our Website at that last link below.

#### Slide 9: U.S. EPA State and Local Climate and Energy Website

Emma Zinsmeister: And so here's just a screenshot of our Website where you can go to access the majority of our resources. Includes a lot of background and different climate change topics whether you're interested in climate impacts in the health implications, on different ways to improve energy efficiency in commercial buildings and public buildings, transportation options and strategies.

We have a lot of background information on the Website with links to other programs and documents that may be helpful. Certainly, to help you develop and implement programs and policies to mitigate greenhouse gas emissions in your communities and a lot of examples and case studies as well.

And just to note that currently our program focuses mostly on state and local opportunities. We are building out more resources and information for tribal governments in the future that we'll be adding to the resource – to the Website.

## Slide 10: Local Government Climate and Energy Strategy Guides

Emma Zinsmeister: And so one of the resources that I mentioned was the local government climate and energy strategy series of documents. The box on the right here just shows the different topics of series of documents covers.

Those in bold are ones that we have updated. There are final versions on the Web. And then also you can see that we have some new topics that are in development that should be posted, you know, within the next several months.

But each of these documents focuses on a particular approach to reducing greenhouse gas emissions and provide information on the benefits planning and design strategies, stakeholders that you would need to have involved in your community to get projects up off the ground, policy mechanisms for promoting clean energy and greenhouse gas reductions and other things like the cost of finding opportunities and, of course, again, lots of examples and case studies so that you can see what other communities have been doing and have found successful on the results that they've been able to accomplish.

## Slide 11: U.S. EPA State and Local Climate and Energy Website

Emma Zinsmeister: In particular, there's one document in these series that's very relevant to today's conversation. We have a document on energy efficiency and local government operations.

This focuses on energy efficiency in existing and new facilities and green buildings and also talks about other aspects of local government operations that you can improve the efficiency of as well.

We currently have a draft on the Website and are hoping within the next couple of months, early fall to post and update a final version. So definitely check out our Website and get a copy of this and we'll certainly send out a list serve notice with any updated versions of any of the documents in the series that are posted, in particular this one.

## Slide 12: Leading By Example Guide

Emma Zinsmeister: And then another resource that our program offers is a document on leading by example. And so this covers a range of strategies that local governments can pursue to improve the efficiency of their own operations and encourage other residents in the private sector to do so as well.

This document was originally drafted with space in mind. So the examples primarily focus on the state level, but the process and the steps and the recommended activities are very applicable for local governments as well.

You can access a copy of the document and some supporting materials on the Website at the address you see here. And if you have any questions related to leading by example activities, my colleague, Niko Dietsch is the right person to be in touch with and his contact information is on the site here.

So basically this covers, you know, different types of activities and measures that fall under the category of lead by example, like, improving energy efficiency in your buildings.

Like, we're talking about today procuring energy efficient products, purchasing green power, other clean energy supply technologies and talks about sort of the process that you can go through and policies you can implement that you really, you know, institute that in your local government operations in a way that demonstrates to your community, your commitment to reducing energy use and reducing greenhouse gas emissions.

#### Slide 13: Contact Information

Emma Zinsmeister: So for the local Climate and Energy Program, here's some contact information and my colleagues Andrea Denny and Neelam Patel, are the main folks that run the local Climate and Energy Program and do feel free to contact us if you have any questions regarding any of the materials that we have. We're more than happy to assist you.

## **Promote Energy Efficiency with ENERGY STAR**

So now, we'll be moving to our first presentation by Kudret Utebay from Cadmus. Mr. Utebay is a bilingual senior associate with Cadmus that has more than 19 years of experience in the education research science and technology and energy fields in both Turkey in the United States.

He currently serves as the project manager for Cadmus' contract with Energy Star for commercial buildings and the public sector. And for the past 10 years, Mr. Utebay has worked closely with K-12 school districts, local governments and other public and private sector organizations to evaluate building energy preference using Energy Star, measuring and tracking tools such as Portfolio Manager.

So I will go ahead and turn it over to Kudret.

Slide 1: Title Slide

Kudret Utebay: Thank you, Emma. Hello, folks. My name is Kudret Utebay. I am with the Cadmus group as Emma mentioned.

I would like to go through Energy Star programs, features, what they have to offer and we will focus on some of the mandates and campaigns that EPA puts together – Energy Star puts together for local and state governments.

Slide 2: The Big Picture: Greenhouse Gas Emissions in the United States

Kudret Utebay: Let's start. As you may already know, commercial buildings are responsible for about 45-50 percent of the greenhouse gas emissions. That's one of the main reasons actually why EPA is trying to help governments with their energy efficiency projects.

Slide 3: Opportunities in Buildings

Kudret Utebay: Thirty percent of the energy that we use in our buildings typically go to waste. EPA found out working with partners like yourself that a reduction of 10 percent could be easily achieved with little or no cost measures.

Slide 4: What is ENERGY STAR for Buildings?

Kudret Utebay: Energy Star is a United States Environmental Protection Agency energy management program. They do a lot – several tools and resources to help you with your energy management program including guidelines for energy management. I'll be mentioning about that very soon.

They – the Energy Star program works in several different markets including the commercial sector like offices, hospitality, hotels, et cetera. They also provide supports to public sector including state, local and federal governments as well as education sector. Among those, we also have health care and small businesses.

#### Slide 5: Join as an ENERGY STAR Partner

Kudret Utebay: I would like to strongly encourage you to join Energy Star as a partner. It will cost you nothing. So it's a no-cost partnership that will help you and your peers communicate your successes, learn from each other.

It's a very simple application form that needs to be signed by one of your higher ranking officials and you'll be signed up as a partner. And once you are a partner, your government's name – your organization's name will appear on the directory of Energy Star partners on EnergyStar.gov.

#### Slide 6: National Recognition

Kudret Utebay: EPA provides some national recognition. Some of these are only valid for partners. We are the first one – one of the very first that designed to earn the Energy Star.

EPA helps you make your building design more energy efficient and they created a tool called Target Finder, that will help you design energy efficient buildings. So it's easier to make changes on a piece of paper compared to making actual changes in an existing building.

So Target Finder tool will help you make that happen. Once your building is up and running, the EPA provides an Energy Star flag for your existing building. If that building operates and achieves the superior performance being within the top 25 percent of best performing buildings across the nation, that's the Energy Star flag you'll see on your screen.

And the last two recognitions I mentioned are building based. If you have achieved a portfolio-wide 10, 20 or 30 percent reduction in your energy use, the EPA can provide you with a leader's recognition as well.

Of course, Energy Star Partner of the Year Award is the best of all and it's very, very competitive and it is only given to those organizations that achieve superior energy efficiency in their operations.

#### Slide 7: Assess Building Performance with EPA's Portfolio Manager

Kudret Utebay: We would like to focus a little bit more on the Portfolio Manager tool. As I mentioned before, Portfolio Manager will help you measure and track the energy consumption of your buildings for all field types.

For all building types, you will receive the basic energy management tool called, Energy Use Intensity. You will receive very normalized and non-very normalized versions of those.

So it just gives you the great tool to look at the basic energy used in your buildings and compare it perhaps against similar buildings around the country or similar buildings within your own portfolio.



For some select building types such as offices, it will also provide a performance score on a 1 to 100 scale. About five years ago, the Environmental Protection Agency added more to use tracking.

So for both energy and water, you will be able to compare your buildings, it's own performance joined to baseline and current measurements. And you will receive metrics such as percent change compared to baseline and energy use or water use.

It will also help you keep track of cost savings and carbon dioxide emissions. As I mentioned before, any of the tools and resources that we're going to mention towards this presentation are at no cost to you. All you need to do is go to [EnergyStar.gov](http://EnergyStar.gov) and start using them.

#### Slide 8: Benchmarking for Local and State Governments

Kudret Utebay: How local and state governments are using the tool? We have created two useful fact sheets for you to read about what your peers are doing. The first one is leveraging Energy Star – a four-pager actually. It started as a two-pager, but right now, there are a lot of local and state governments passing mandates or ordinances and some of them are focusing on volunteering campaigns.

You will see a list of those in this document. Of course, I would like to encourage you to take a look at the leveraging Portfolio Manager fact sheet to learn more about Portfolio Manager.

In that little map at the bottom right, you will receive a copy of these slides so you will see them better. That's the U.S. map showing local and state governments benchmarking and warranty programs around the country.

#### Slide 9: Local Government Benchmarking Mandates

Kudret Utebay: So the first document I mentioned here, leveraging Energy Star, includes examples, like, Austin, Texas; New York City, San Francisco, Washington, D.C.; Westchester, Pennsylvania, actually, I believe either the first one or one of the very earliest governments that past a mandate to use Target Finder and Portfolio Manager tools.

This is a snapshot of that leveraging Energy Star four-pager document. I wanted to give you two quick examples. City of New York who passed a legislation back in 2010 mandating benchmarking of water and energy use in New York City buildings, both residential and commercial, and their minimum for the area for – to meet the criteria for this mandate is 50,000 square feet.

They are expecting about 20 – somewhere between 20 and 30,000 buildings to be benchmarked based on their estimates.

District of Columbia passed a Green Building Act of 2006 mandating benchmarking of city buildings only first. They realized that this was a very, very useful tool. They amended Green Building Act of 2006 with D.C. Clean and Affordable Energy Act of 2008.

This act mandated benchmarking of commercial buildings – private commercial buildings in – located in the District of Columbia and they have created a criteria such as buildings over 2,000 – 200,000 square feet or above have to benchmark and report results on a – on a Website that is determined by District of Columbia disclose that information basically to their – to their potential customers – tenants.

That criteria of 200,000 square feet is going to change next year. They have levels like 150,000 in 2012 with 100,000 in 2013, et cetera. If you would like to read more about these particular mandates, please take a look at the leveraging Energy Star four-pager or send me an email.

Slide 10: Benefits of Benchmarking with EPA's Portfolio Manager Tool

Kudret Utebay: Besides those buildings that received that 1 to 100 score, I mentioned using the energy used in 10 cities to assess your building's energy performance. This is one of the examples that we use. Fire stations are not eligible for that 1 to 100 score. Instead, we use energy used in 10 cities and compare the fire stations in this particular jurisdiction against each other.

As you can see on this – on this graph, fire station 4 and fire station 8 are using significantly higher energy compared to their peers. So this particular local government started taking action to find the reason for that high energy use.

There are some governments that are using Portfolio Manager to create a momentum for their related programs. The Commonwealth of Pennsylvania is one of those examples. They have a grant program called P.A. Conservation Works and they're asking applicants to benchmark their buildings and disclose that information in order to apply for a grant through our money.

Slide 11: Verify Improvements...and Communicate Them!

Kudret Utebay: This is another example created by Arlington County by (John Morrow). This is one of the report cards they created after benchmarking their buildings. It gives a clear indication of whether a specific library is using more or less energy and time.

If you would like to read more about what Arlington County is, we have a Website listed just underneath the graph here. In my previous slide, I mentioned guidelines for energy management.

Slide 12: Superior Energy Management Approach

Kudret Utebay: The EPA spoke with several energy managers across the country from different sectors and they came up with these basic six steps to help you create a great and working energy management program.

It's not a very long, long document, I believe 25, 30 pages or so, that will walk you through different stages of a successful energy management program. Of course, it starts – everything

starts with commitment, especially higher up commitment and then you need to look at how their buildings are performing or how your energy program is working and you need to assess the performance and set yourself goals. And based on those goals, you need to create your plan and start implementing that.

Throughout this whole process, you need to keep evaluating your progress so it's actually a continuous cycle. The guidelines could be downloaded on the [EnergyStar.gov/guidelines](http://EnergyStar.gov/guidelines) Website.

#### Slide 13: Tap Into Expert Help

Kudret Utebay: While you're working on getting your building efficiency programs better or creating some kind of an energy plan if you don't have one or making your current energy plan something that will work better for you, you are not alone actually.

The EPA has some technical expertise that it holds. You will see on the screen there are some links to reach out to some of those experts. EPA also provides you with a hotline. The phone number for that is 1-888-STAR-YES. If you call and ask a question, they will either answer it directly or they will get back to you very quickly.

We also have [Buildings@EnergyStar.gov](mailto:Buildings@EnergyStar.gov). I have this email address at the end of the presentation. You can send your questions directly to EPA and someone will – someone will get back to you within 24 hours.

#### Slide 14: Leverage ENERGY STAR in Your Community Outreach

Kudret Utebay: Let's take a look at some other examples.

#### Slide 15: Local Recognition Goes a Long Way

Kudret Utebay: This is Mayor Abramson who actually created a program that will recognize buildings that achieve superior energy performance.

And because of his success, he actually earned EPA's highest award, the Energy Star Partner of the Year award last year.

#### Slide 16: Local Campaigns Engage Building Owners

Kudret Utebay: These are some voluntary programs that are going on around the country. I certainly suggest that you take a look at all of these. I do not have time to go in more detail, but if you have any questions, again, feel free to send me an email or give me a call.

These are really great examples of how you can modulate your community to do better with their energy and water use.

#### Slide 17: Roll Up Results with a Portfolio Manager Master Account

Kudret Utebay: Most of these governments use Portfolio Manager as their tracking tool. Anyone who participated with any of those campaigns had to benchmark their buildings using Portfolio Manager to keep track of in some cases several hundred buildings in one account.

The EPA provides the metric on future where your government can create a master account and will allow participants to share their buildings with that master account. That allows the government to actually to take a closer look at the results and the data entry points to make sure that everything is aligned with the reports that are submitted to apply for those campaigns.

Slide 18: The Savings are Adding Up!

Kudret Utebay: Here are two of those examples. I briefly mentioned Louisville's Kilowatt Crackdown. There were over 100 buildings that participated in the first year. We are in the second year of that.

During this campaign, Louisville participants saved about 5 million KWH in energy use. So that's a huge success on Louisville's part, and they're continuing.

Chicago Green Office Challenge, it also started a few years back and in the first year, they saved about 70 million KWH in their electricity. That's equal to about 55 million metric tons of carbon dioxide.

Slide 19: Include ENERGY STAR Training Resources in Your Outreach

Kudret Utebay: Of course, you will wonder how you can get access to Portfolio Manager and how you can use it. The EPA has several opportunities for you to learn how to use Portfolio Manager.

I suggest that you start with benchmarking starter kit which has three components. The first one I will suggest that you take a look at the data collection worksheet. That will give you all the data requirements including some space character fix as well as energy and water use.

To learn quickly how to benchmark in four simple steps, you may want to take a look at step-by-step quick reference guide. The animated training at the top is going to walk you through those four simple steps. That's an animated training. You can pause. You can take breaks. But it's not really long. It should be around 25 minutes or so.

Besides that kit, EPA also provides live and recorded training sessions. We'll go into more details. Benchmarking Portfolio Manager 101 is one of them and my team also provides Benchmarking 201 for large portfolio benchmarking.

If you're a local or state government that has a quite large portfolio, we suggest that you join Portfolio Manager 201 session as well.

Besides Portfolio Manager relates to sessions, the EPA will also provide you training sessions on participating in procurements, computer power management or financing innovative financing methods for your energy efficiency projects.

All you need to do is go to [EnergyStar.gov/businessstraining](http://EnergyStar.gov/businessstraining) and register for one of those knockoff training sessions. They're typically one hour to 90 minutes – 90 minute sessions.

Slide 20: Engage Employees/Tenants with EPA's "Bring Your Green to Work"

Kudret Utebay: EPA also provides you with tools and resources to help you at work. Bring your green to work is one of those tools. It will give you some tools and resources to use to make a difference at your work as well as some success stories.

And, of course, it does not end at work. You may purchase energy efficient equipment, but you also need to train your staff because those are the people who are actually using the buildings and equipment you've purchased.

Slide 21: Promote Tools for Energy Efficiency Purchasing

Kudret Utebay: So training your staff becomes something really, really important. Oh, and here's the purchasing and procurement Website. Please go there and take a look at it. You will find some very useful information including some sample procurement language that you can copy and paste and drop it into your RFPs. That would include the criteria for energy efficiency.

You don't have to think about it. You don't have to recreate. EPA already takes care of the criteria portion for you through Energy Star purchasing and procurement Website.

And there are really neat tools like savings calculators. If you, for example, want to purchase LED exit signs, you can download the LED savings calculator and compare the – your savings, compare it to the incandescent or all versions of exit signs versus LED signs.

Slide 22: Reach Out to Small Business Owners

Kudret Utebay: EPA also has a small business and congregation support. This is their Website. Again, similar to what you've seen on commercial buildings, you will find some good information about how you can help your small businesses with their energy efficiency improvements.

Slide 23: Promote Residential Energy Savings

Kudret Utebay: We also have a lot of good tools such as home energy advisor and home energy yardstick. These tools will help you measure the energy performance of the homes in your community.

You can also use the Energy Star at home tool that you see on the right-hand side in the middle. It is an interactive tool where the tool walks you through the house where you can click and get

ideas about what you can do, for example, in your kitchen or living room to make your home perform better in terms of energy performance.

Slide 24: Example:GreenNYC “Be Cool & Smart” ad campaign

Kudret Utebay: This is something that New York City has done. It's a PSA sponsored by Best Buy and Energy Star programs. You could work with public and private sector entities actually to make your own campaigns and programs with success.

Slide 25: Wrap Up

Kudret Utebay: So we mentioned – I understand I have mentioned a lot of tools and resources throughout the 20, 25 minute presentation here. You are not alone. There is a lot of help that you can get from EPA and its contractors like me.

Slide 26: For More Information

Kudret Utebay: If you have any questions, please do not hesitate to give me a call or send me an email. Here's my contact information along with contact info of Katy Hatcher and Leslie Cooke. They are responsible specifically for public sector outreach and support.

And below is the Cadmus group team that supports Katy and Leslie on their mission.

And with that, I would like to pass the mike back to Emma.

Emma Zinsmeister: Thank you for your presentation, Kudret. And if anyone has any questions on the tools and resources that Kudret had spoken about, please feel free to enter those into the question panel and your Go To Meeting pane and we can address those at the end of the session today.

I just also wanted to point out quickly that the energy management guidelines document that Kudret mentioned in his presentation is also a fundamental piece of the local government climate and energy strategy document that we have on energy efficiency in local government buildings and a number of other Energy Star resources that are also profiled in there.

So that document is actually a really good place to go to find some links to these tools in one place.

## **New Jersey Sustainable Energy Efficiency Demonstration Projects (NJ SEED)**

So with that, we'll turn it over to our next presentation from the folks at the College of New Jersey. Tony O'Donnell is the project specialist at the Municipal Land Use Center at the College of New Jersey. He is currently the project coordinator for the EPA Climate Showcase Communities Program grant and deals with the highly specialized technical, economic and policy topics associated with research and outreach on energy and sustainable development.

From 2004 to 2010, Mr. (O'Donnell) was employed as a staff economist at the New Jersey Commission where he was responsible for managing the long-term economic monitoring program. In addition to compiling, maintaining and analyzing a large and diverse database from 50 municipalities, Mr. O'Donnell also published an annual report on the regional economy.

And his colleague, Randall Solomon, who unfortunately was unable to join us, is one of the principals that develop and manages sustainable Jersey certification programs. Prior to this, he was the founder and executive director of the New Jersey Sustainable State Institute at Rutgers where he worked to expand the capacity of public decision making to address sustainability.

Mr. Solomon's policy experience includes positions such as policy advisor, a sustainable development for the New Jersey Board of Utilities, Integrating Land Use and Energy Policy and the director of the State's Campaign for the Resource Institute in San Francisco and he was also the policy director for the Non-Profit New Jersey Future.

So with that, I will turn it over to Tony to kick off the presentation.

Slide 1: Title Slide

Tony O'Donnell: Thank you, Emma. I want to thank you for inviting us to present. We're excited to show the work that we've done. I also want to thank the U.S. Environmental Protection Agency for awarding us the grant to participate in the Climate Showcase Communities Program.

We received our grant in – last year in 2010 and we've been busy in the past year setting this – the footwork for the rollout of actually implementing the target's actions I'll go through now.

Slide 2: Partners

Tony O'Donnell: So the title of our grant is the New Jersey Sustainable Energy Efficiency Demonstration Projects. There we go.

The partners so you see, Randy and myself, read the Institute for Sustainability Planning Governance house at the College of New Jersey. We, as Emma indicated, we're the principal investigators.

We're working with three townships, the three municipalities in New Jersey; one in the north, which is the Township of Montclair, one in the central part of the state, Highland Park Borough in Middlesex County, and finally, one in the southern part of the state, Cherry Hill Township.

As you can see from the population figures that I put in parentheses, we range from fairly small at 14,000 to medium size at 37 and then a larger size at 71,000 at Cherry Hill, but still below the scale of municipalities that typically have undertaken aggressive steps like this.

And we – so I'll explain that in a moment. We're also received a very important support from the New Jersey Board of Public Utilities. They are providing us with data on a lot of these programs and will give us the ability as we move into implementing the program to measure the actual results that – for the actions that we've chosen to undertake.

#### Slide 3: Key Objectives of the Program

Tony O'Donnell: So the key objectives of the program we want to understand what greenhouse gas reductions are possible in small and medium sized municipalities. There has been some research, as I mentioned, on larger municipalities undertaking this.

A lot of times the larger municipalities have, I wouldn't say unlimited, but vast resources. They have planning departments generally. They have financial resources that enable them to be able to implement things that smaller and medium sized municipalities may not be able to implement.

So what we wanted to take a look at if it was possible to mobilize the resources at a grass roots level in small and medium – small and medium sized municipalities to make a reasonable and measurable effect on greenhouse gas reductions.

#### Slide 4: Key Objectives of the Program

Tony O'Donnell: So the second objective is we want to establish a protocol and demonstrate the impact of integrating these targeted state and federal supports to provide capacity for the small and medium sized municipalities to take responsibility for doing greenhouse reduction efforts.

#### Slide 5: Key Objectives of the Program

Tony O'Donnell: The third objective was to once we do that is to establish and disseminate specific replicable measures that lead to greenhouse gas reductions. In a few moments, I'll be going through the energy model.

We developed a list of about 60 actions, very specific actions in various sectors, municipal operations, residential, commercial and industrial of steps that can be taken and we want to – we've chosen targets for each of these areas and each of the municipalities and we want to go ahead and see if we can hit those targets and establish what can be repeated from the results of the process as we go through it.

#### Slide 6: Key Objectives of the Program



Tony O'Donnell: Fourth, we want to demonstrate and quantify the impact that the municipal efforts by targeting residents and businesses using the data that is supported by the process. You'll see in a moment as I go through the energy model there's quite a bit of effort put in, in the first year of the project to build an energy model.

As much effort will be put in to actually measuring if we hit those goals and that's why having the Board of Public Utilities as a partner is important to us as we go forward and measure the results of our goals.

#### Slide 7: Key Objectives of the Program

Tony O'Donnell: And the fifth objective of the program is to quantify and document the results of the effort to enable future advancements. I'll speak a little bit. We have a project here at the College of New Jersey at the Institute for Sustainability and Governance called, Sustainable Jersey. It's a fairly unique program.

Nationally, it's a certification program that allows municipalities to go green, save money and make themselves sustainable over the long run. So we hope that to take the results of the actions in this program and duplicate the successful actions and integrate them into our Sustainable Jersey Program.

So that's the objectives. I'm going to go into more – now, switching. I'm more into the process of how we get there.

So I mentioned a few times about this energy model. So I'm going to try to pull up a spreadsheet and hope that it works for me here. Give me one moment. Can I move this? OK.

So this is the energy model. Emma, can you see this OK on your screen?

Emma Zinsmeister: Yes, I think it looks good.

Tony O'Donnell: OK. We have taken this – do you see on the bottom there's a bunch of different tabs, some color-coded? The ones that are color-coded in green are the ones that we've taken and actually tailor to go on the road and share with the municipalities and use as a planning tool.

These other tabs are the background, the guts of the model. I'll go – so for each municipality, we have the ability to input a specific that these things here are specific variables that relate to the township. So I've chosen of our three, I'm demonstrating the Montclair energy model.

So you see we've put in the carbon footprints, a bunch of different things in the community population, the number of municipal employees, just a ton of data.

These things here in column B are the list of actions that I mentioned. As Kudret outlined very well, the Energy Star Program is – adheres to how performance of Energy Star action that Kudret talked about here.

So we have – and then there are a number of assumptions that go with each program. So this is the list. Then some of these other tabs show we have – their fuel price forecast.

This model attempts to measure things from now until the year 2030. So we have fuel price predictions for the future, we have savings and cost factors, we have a tab here that measures the carbon reduction of undertaking each of these actions.

To go along with this spreadsheet, we have developed a text document – a rather detailed text document telling the municipalities exactly what they need to do step-by-step for each of these particular actions and from the research what – on average what they could expect to save if they do these actions.

So we took this on the road. What we did is we needed to establish a baseline. So with help from the New Jersey Transportation Planning Authority, we were able to calculate the carbon footprint for each of the three municipalities.

We used the base year of 2009. So as you see here that it's broken into five or six or seven categories. For 2009, Montclair's metric tons of carbon emitted were almost 384,000.

So that's the background and these pie charts here are the breakdown of 23 – 24 percent transportation, 15 to 16 percent in electricity residential that this chart here is a little broader representation.

So you'd say about 50 percent of Montclair's greenhouse gas emissions are from residential, 20 percent are from commercial, 24 percent from vehicles and you see the others.

So that gives us their baseline and – but now, we needed to come up with a goal on it. So how did we come up with this 4 percent goal that you see in yellow? So we want to come up each year reduce carbon by 15,358 metric tons.

We came up with the 4 percent goal by backing out from – the State of New Jersey has adopted a goal similar to the federal government that we want to have our carbon emissions reduced by 80 percent by the year 2050.

To get there, if you backed that out, you need about a 4 percent reduction every year to get to that by 2050.

So that's what we chose as our goal, 4 percent a year. All right.

So with that goal in mind, 15,358, now, we go to this – these actions. Now, this is the – this tab I'm showing you now is the totals. It's broken into four tabs here: homeowners, renters, commercial and municipal. There are various actions.

This list is actually a much smaller subset of the list I showed you over here because as we went through this process with each of the towns, in this case, Montclair, some immediately didn't

match Montclair either through demographics or the resources they have to implement the programs.

So they chose the ones that seemed reasonable to them and this is an interactive model. We went a number of times with different stakeholders in each of the municipalities and sat with them, Randy and I, and said, "OK. Do you want to do home performance with Energy Star?"

You'll see here if I take the "X" off that these numbers are now not included in these charts over on the right. Actually, let me – I'll just go ahead and so you can see in real-time those numbers being subtracted out.

So there, you have – so if I was going through this exercise right now, I could say, "OK. Do you want to do home performance with Energy Star?" If they want to do it, we click it off. Then, we have the ability to ask them, "OK. Well, how many residents do you think you can get to do that?"

We – when you see this column of recommendations, this is actually a good working model. This is – wasn't the very final version, but this was one of the iterations.

There are about 8,700 households – homeowner households in Montclair. So we tried to figure out what percentage do we think that we can get to do this out to agree in the next couple of years to pledge to get a home performance of Energy Star audit and then undertake the recommendations of the audit?

So with some input from the statistics we had from BTU along with what the people in the community told us, we decided that the goal that they were going to set was 400.

So we put – but you can change. So if they had chosen 900, if I put 900 in there, you see the numbers over here change and that's just for this tab. So that's the same with all these actions. I won't go into all of the – I think Mount Claire chose about 15, but there's some chosen in homeowners, there's some in the renters category that only renters would be able to do. Some in the commercial category. Anything that's – so for in this case, some of these weren't chosen for the commercial category.

And then for the municipal government, the Direct Install Program, solar purchasing for municipal buildings. And so now, you take these four tabs and these are all represented in this total here. Let me go back and click these things back on so I can show you what the actual results were and I believe I changed this to 900. OK.

So if we go back – so with those collections of actions checked off, we were able to almost get to the 4 percent. We felt that those were a reasonable set of actions for Montclair to undertake. So that's the goals that are set.

And we did this exercise with each of the municipalities. Again, three or four times we sat with them and we felt that this was a really useful exercise to go through. I'll go back to the slide presentation now.

## Slide 8: Process

Tony O'Donnell: So that's the energy model. The next thing is the – and I think I described number two, the stakeholder feedback. We took that model. We went to the three municipalities interactively with them. We chose the actions and tailored them to what they thought they could get given the resources they have.

This month actually we're at stage three for the three municipalities. This targets in actions are now – have been formally adopted about their municipal bodies to resolution so that it gets some buy-in – some official buy-in from the governing body and we use that to increase our outreach as we go forward.

Number four, once these targets from the actual plan were adopted, now is the kind of hard groundwork, the aggressive outreach section of the plan. To get to the reductions that we need, the 4 percent over two years, we'll have energy coordinators on the ground in each of the three municipalities working with the green teams to go out and engage individual residences – residents and homeowners, businesses and then we also are targeting them through a social-based media marketing to try to get groups focused on PTOs, what I – environmental groups, local, the rotary, whatever the local groups are that have influence.

The fifth part of the process as we go through this outreach of the next two years is that we will be tweaking the goals that we see that we over or underestimated or something seems worth more effort or less effort. We will report those outcomes, be meeting regularly to adjust the program and we'll be collecting all this towards a goal of the number six in the process of program applicability.

We want to use the lessons we learned at the end. To answer the question at the beginning, is it possible for small and medium sized municipalities to make a substantial impact on their carbon emissions? We think it is, but we'll see what the answer is after we go through this.

And we will use those lessons to inform our Sustainable Jersey Act Program by implementing these new actions in a much more great level of detail than we have in our Sustainable Jersey Program right now.

## Slide 9: Specific Examples in NJ SEED

Tony O'Donnell: So I just wanted to show a few slides on this specific title of today's Webinar and that's the specific examples in our New Jersey seed program with regards to energy efficiency in local government buildings and I have the three towns up.

Montclair – well, all three towns actually did a Direct Install Program. Montclair and Highland Park agreed to do power purchase agreements for solar. I believe Montclair is committed to getting four municipal buildings to do a power purchase agreement.

And Highland Park was fairly aggressive. They have a – they're doing a plug-load software program that you buy the – I believe the title of it is Navida, but there are others and it actually saves energy by diverting energy to appliances when they're not in peak usage.

And then a couple of towns adopted a behavioral program for the municipal employees. It involves turning off lights at night, a whole list of different actions that can help save energy.

#### Slide 10: Montclair Direct Install

Tony O'Donnell: The next couple of slides for each of the – so this is a little pullout of the Direct Install Program sheet from Montclair that I showed you from the energy model. You can see that Montclair's going to save almost 400 metric tons of carbon a year.

This Direct Install Program's a great program. Right now, 40 percent of the cost of whatever is installed is born by the municipality and the other 60 percent is an incentive from the Direct Install Program.

I just learned today that this – that this is kind of good timing because those numbers are going to go up to 70 percent next year.

So we're happy to see that and we hope that it will enable us to get more takers to expanding all Direct Install because that's also available for commercial enterprises as well as municipalities.

Highland Park, this is their – oh, I'm sorry. Let me go back and – it's a little blurb on the power purchase agreement for the municipal buildings in Montclair.

#### Slide 11: Highland Park Direct Install

Tony O'Donnell: Highland Park, there's their numbers for their Direct Install. Highland Park's much smaller, but they were able to leverage energy efficiency community block grants and some funding as matching funds.

So essentially, 60 percent of the costs of Highland Park's Direct Install Program is paid by the state. The other 40 percent was leveraged funds. So essentially, they got all the stuff installed for free really and they'll be saving over 100 metric tons a year off their carbon emissions.

#### Slide 12: Cherry Hill Direct Install

Tony O'Donnell: And finally, we have Cherry Hill and this is – Cherry Hill is the largest of the three. Municipalities are 70,000 residents and you can see that this fairly substantial savings, 379,000 kilowatts for their Direct Install Program. OK.

#### Slide 13: Public Outreach Efforts

Tony O'Donnell: I just quickly want to dive – I have a couple of minutes left. I quickly want to outline the public outreach efforts. We have an energy coordinator in each municipality that we

work with that I meet with weekly and actually we've been meeting more than once weekly and they go out and work with the green teams to implement these things.

They've – we've identified key community stakeholders and engaged them early on in the process of setting the goals as I described in the energy model. Now, that the goals have been reached, they'll have an aggressive grass roots marketing campaign, something that might not be as easy to do actually in a larger municipality that has more finances, but sometimes has not as much energy when it comes to grass roots marketing.

As I've mentioned, we've leveraged existing state utility incentive programs to maximize resident's participation and we've tried as much as we can to use Facebook, Twitter, those type of things to gather pledges and encourage participation to follow-up.

#### Slide 14: Challenges

Tony O'Donnell: We did have some challenges to state budget constraints in the economy. Some of the programs that we set up in the original energy model had significant changes to the incentive programs, in one case an entire program was eliminated.

So we had to kind of pull that out of the model and rework some of the background stuff in the energy model.

We had some capacity issues when anytime you have a program with as many moving parts as we have with three municipalities, we have an energy coordinator and a number of people on the green team in each town. Then we have BTU and ourselves.

There's been a variation in available resources that's impacted the ability of what the local governments can do to lead the community-wide efforts. I had more challenge than we thought in capturing public attention, but we're working on that.

And then the data issues, it's more complex than we originally anticipated, but I think we're at where we need to be at now to go forward.

#### Slide 15: Questions or Comments?

Tony O'Donnell: So that's my presentation. I'll be happy to take questions later in the question portion. This is the contact information for myself and Randy Solomon. We're perfectly happy to share the spreadsheet energy model. It's tailored to New Jersey, but it – this – the guts that they can be adapted to any state, I imagine.

So with that, I'll turn it back to Emma and thank you again.

Emma Zinsmeister: All right. Thank you, Tony, thank you for your presentation. If anyone has any questions on the material that Tony presented, please enter that into your Go To Meeting panel in the question section and we'll get to those at the – at the end of the presentation.

As the project progresses, since they're a recipient of an EPA Climate Showcase Communities Grant, you can track their progress and see, you know, how the project is coming along on our Website.

So that's [EPA.gov/statelocalclimate](http://EPA.gov/statelocalclimate) and right on our homepage there, there's a link for Climate Showcase Communities where you can get to profiles for all of the communities.

So you'll see the Cherry Hill New Jersey Program and then also the Cary, North Carolina Program, which our next speaker is going to talk about.

## **Red and Blue and Green All Over: A triangle Region Sustainable Emergency Services Program to Reduce GHG Emissions**

So I'll introduce Emily Barrett who is the sustainability manager at the town of Cary, North Carolina, and she's been serving in that position since the Spring of 2010.

She has a background in consulting in government and she is working with the town of Cary to systemize its purchased sustainability with a particular emphasis on energy.

So with that, I will pass it over to Emily.

Slide 1: Title Slide

Emily Barrett: Thanks, Emma. Hello, everyone. My name is Emily Barrett as Emma said and I want to thank you for being here today. I really enjoyed Kudret's and Tony's presentations and saw some things I could use.

So hopefully today I will show you some things that stimulate some thought for the rest of you.

So the red and blue and green all over has a trite name, but a really important mission and that is to not only propel sustainability efforts for our own fire and police departments, but also to share that information and to compile regional information so that we can motivate other departments to do similar initiatives.

And the idea is that this will be a venue and a project that can be fireman to fireman or policeman to policeman kind of communication because I think we all like to talk to others within our fields about things that are new.

And for many municipalities of our size, energy efficiency initiatives are new. I'll tell you a little bit about Cary, North Carolina. We have about 143,000 residents, about 1,200 town employees. We're just west of Raleigh.

Many people who live in Cary work in the surrounding Triangle area: Durham, Raleigh, Chapel Hill.

We are close to the Research Triangle Park, which is a economic development region that's got an emphasis on high-tech. The town has key values that it operates by 11 key values and as I see it, three of those values are very solidly placed in sustainability. That's being stewards of the environment, being cost-conscious and being creative.

So Emma asked me to speak a little bit about why we applied for this particular grant and we're very grateful to have EPA support in rolling out sustainability town-wide.



Our council has a desire to lead by example and we hope that not only will our operations be more sustainable, but that we can share what we've learned with other municipalities and with our residents as well.

So because my position is new and systemization of sustainability is new for the town, we saw a real opportunity to take advantage of the willingness of our fire and police chiefs to be leaders, both among their peers here as department directors and in the region.

So really what we want to do as a town is to roll out sustainability in a meaningful way that fits with our culture and our culture is very operation-focused as many of you listening may be able to relate to, particularly fire and policy. So we thought this was a great way to get started.

So I'd first like to thank our partners. Let me go back actually. You'll see in this picture to the left there are two young people: Kealy DeVoy and Zach Tinkler. They're interns that we have through the Environmental of Defense Funds Climate Core Program. They're graduate level interns.

Kealy is in the School of the Environment at Duke University and she's getting a master's in environmental management with a focus on energy management. And Zach is a master student at N.C. State obtaining his MBA.

So they've been a nice duo to get our grant kicked off. And you'll see the woman in the middle. Her name is Bonnie and she's one of our energy points of contacts.

As part of this grant, each of our seven existing fire stations have an energy point of contact to help rollout within their particular station initiatives that we have going on in order to make their facilities more efficient.

Slide 2: Partners

Emily Barrett: So I'd like to thank our partners, the Environmental of Defense Funds, the town of Chapel Hill, the city of Durham, the city of Raleigh and the Triangle J Cog. I'll tell a little bit more about each one of those and what they're doing.

Slide 3: Goals

Emily Barrett: So the goals are to not only initiate projects that save energy and reduce greenhouse gases, but also to profile them for others. I want to take a moment to tell you about our fire station.

We have seven fire stations ranging in square footage from about 7,000 square feet to 17,000 square feet. Our total energy spend for the fire department in 2010 was \$95,000 and our 2010 metric tons of carbon dioxide equivalent was 999.

Our energy intensity will be put into the Energy Star Program in the EUI format; however, right now, we express it in kilo BTUs per square foot.

If you look at the site based calculation, our fire stations range from 62 to 109. If you look at source calculations, it ranges from 148 to 270.

And our police are a different sort of quandary. Our police do have a shared space in Town Hall, but as many of you know, cars are sort of the default office for officers.

#### Slide 4: Objectives

Emily Barrett: So in the fall, we're a little bit behind schedule, but in the fall, we will break ground on a climate showcase fire station. This will not be lead certified. At least that's not the plan so far.

If some things come under budget, we may be able to afford to certify it, but we basically selected the points in the lead basic category that focused on payback. So this should be a building that's very efficient and has demonstrable payback.

We're also going to develop a suite of police and fire specific projects as I said and we'll synthesize those not only for our town, but also for Raleigh, Chapel Hill and Durham and issue a challenge to others to do as we've done.

#### Slide 5: Climate Showcase Fire Station

Emily Barrett: So the fire station, as I said, fire station 8, is intended to be a showcase. The fire station 8 will be co-located with two schools: a middle school and a high school. It is yet to be built, as I said.

And in the near future, we expect a community center to be located in the same area. So we think it'll be a really interesting way to show people not only how a fire station can be more sustainable, have a lower footprint, but also be a venue to talk about things that maybe they can apply in their own home.

#### Slide 6: Fire Station Sustainability Upgrades

Emily Barrett: For instance, our plan is to have the firemen keep their compostable items and compost them in a rotating drum, compost systems.

We'll also have a solar system. We'll be using reclaimed water ultimately from our wastewater treatment plant pipe there for toilet flushing and irrigation.

And so obviously, we plan to do tours with the co-location of so many great public sites like the school and the community center, we think, we'll have quite a bit of traffic.

#### Slide 7: Fire Station Sustainability Upgrades

Emily Barrett: And so what we're starting this summer with Zach and Kealy is simple building assessments to determine what would be the best upgrades to do within a certain amount of money.

We're taking advantage of incentives provided by our power provider and also hiring some additional technical assistance.

So as I said, we are focusing on both the simple and the more complex. We're interested in making sure that for our energy systems not only for fire, but for the town as a whole that we have a proactive replacement system so that we know how old they are, how much they cost to operate and when it would be smartest to replace those.

We're building at building envelope, maintenance procedures, as I said, and we're hoping what we can do is to share on the Website more about the payback.

#### Slide 8: Fire Fighter's Energy Challenge

Emily Barrett: So Triangle J Council of Government has agreed to work with the town to host the Website where we share the information both for fire and police. Our interns this summer have been collecting information from Raleigh, Durham and Chapel Hill.

The idea is to have information that's not only quantifiable, but also anecdotal. So, for instance, the Raleigh firemen have been really pleased with both the performance and the payback of some of their lighting retrofits. Even in their oldest stations.

And so we think it would be neat to possibly provide You Tube videos of the chiefs speaking to that.

So I wanted to take a moment and just pause here and talk about a few other things that we've been doing regarding the compilation of information and police-related items because police are not in buildings, as I said, and you guys know.

A lot of police initiatives will be focused on vehicles. Right now, not as part of this grant, but will certainly be summarized in some of the case studies, is we're doing a pilot on idle reduction technology.

We're using a battery called, Energy Extreme for some police units. The idea is that idling is not only bad for the environment, but it's hard on gasoline vehicles. It's bad for their engines.

So the energy extreme battery will actually run equipment. So when you see a police car parked at a crime scene, typically it is running in order to run the lights.

With energy extreme pilot, we'll be able to demonstrate or not, depending on how the pilot goes, just how useful that is for us and be able to share that information.

Other kinds of information – other kinds of information that we'd like to share are green roofs that Raleigh has done, solar thermal hot water heaters that have been done in Chapel Hill and Raleigh.

#### Slide 9: Next Steps

Emily Barrett: And so next step, we have issued RFP to complete the upgrades of our existing fire stations. We're still collecting our regional data in developing our T.J. Cog Website and we're breaking ground on fire station 8.

Obviously, we cannot issue a challenge to the other firefighters until we've determined exactly what our expected savings are for our regional fire stations here in the Triangle.

So we'll be doing that and issuing our challenge this coming summer in some fire employees conferences that are coming up and we plan to revise our communication plan, issue press releases and do tours not only at fire station 8, but possibly the fire stations around town as part of other community events like safety events and things like that.

#### Slide 10: Contact Information

Emily Barrett: So I look forward to talking with each of you. I would like to share my contact information. I'll do it via Emma, I suppose. You're free to email me at [Emily.Barrett@TownofCary.org](mailto:Emily.Barrett@TownofCary.org) and I'd love to share with you at another point about our in-school talks which is another component, but not directly related to energy efficiency, but definitely related to public outreach.

Emma Zinsmeister: Great. Thank you, Emily. And when we post a copy of Emily's slides to the Website, we can include an additional slide with her contact information.

But if you have any questions now on the project that they're doing in Cary, please feel free to enter those into the Go To Meeting pane because we're about to start our question and answer session.

So first and foremost, thanks everyone for tuning in and submitting your questions and to all our speakers for sharing information.

## Question & Answer Session

Emma Zinsmeister: Now, we're going to open up for questions and Lauren will read off some of the questions that you've submitted thus far. If we run out of time, we have about 10 minutes, we will take the questions and provide written responses that we'll post online as well with the other Webcast materials.

So Lauren, I'll turn it over to you for our first question.

Lauren Pederson: Great. Thank you. The first question is for Kudret. What is the forecast for updating the CBECS database in Portfolio Manager and will there be a 2011 update? There are a few participants that have a question about how CBECS funding will effect the updates to Portfolio Manager. Would you be able to address that?

Kudret Utebay: Yes, that's a great question and from the question I understand that our audience keeping track of what's going on in the market.

As they make the month, people might be aware of the funding for CBECS database has been cut. So I am not sure at this point if there will be a 2011 version of the CBECS database.

But does not really stop Environmental Protection Agency. They are working with private and public organizations to collect information for newer state such as data centers. EPA created that space type working within the IT sector or water and wastewater treatment plant benchmarking.

We worked with about 70 experts on the market including a lot of water and wastewater treatment plants who were very willing to have EPA create that space type.

So we may – we may or may not have CBECS database, but EPA is constantly in search of finding good and reliable data to provide you with updates on the current tools or to come up with new tools within Portfolio Manager.

So I'm sorry I can't believe – tell much about CBECS database feature at this point.

Lauren Pederson: OK. Thank you for that response, Kudret. And then Tony, we have a few questions for you regarding sharing the spreadsheet and I believe at the end of your presentation- you said that that was OK. Would you prefer people email you at your email address in order to request the spreadsheet?

Tony O'Donnell: Yes, that's fine. We also will be posting for anybody that's a Climate Showcase Community has access to the Website for the grant participants. We'll be posting it there. But anybody that doesn't have that ability, please feel free to email us and we can share a copy of the spreadsheet.

Lauren Pederson: OK. And then also within that spreadsheet and model, what was first the fuel price prediction data that you used?

Tony O'Donnell: Could you repeat that? What was...

Lauren Pederson: Yes, within the spreadsheet, the participant asked what the source of the fuel price prediction data. So did you have projected fuel prices?

Tony O'Donnell: Yes. Let's see. I have it in front of me here. Energy Information Administration? On – in the spreadsheet as we share, it's fairly well documented the sources.

There are prices for natural – the Henry Hub Wholesale Metro Gas Price Forecast, New Jersey Wholesale Electricity Price Forecast and it's all – a lot of it's from the Energy Information Administration, their Website.

Lauren Pederson: OK.

Tony O'Donnell: OK?

Lauren Pederson: Great. And have you verified the model or is it – is it based on assumptions or maybe a combination of the two?

Tony O'Donnell: Yes, it's a combination of the two. The model, actually, we adopted it an existing study and that – but this matched closely with what we wanted to do. So we actually updated these – the emission forecasts and all these price forecasts from the models created a couple of years ago. So it's updated into the most recent price forecast that we could find.

Lauren Pederson: OK. And then one more question for you. Have your utility partners shared any concern about the cost of conservation on the utility in light of reduced revenue, reduced funds and increased regulations?

Tony O'Donnell: No, they're very much a cooperating partner. This morning, I was at a meeting. We meet monthly with them. It's an energy efficiency committee and New Jersey has been fairly progressive in trying to do energy conservation.

So there's – we have their full support for these programs. So yes, I don't think that that's an issue at all.

Lauren Pederson: OK. And then Emily, we have a couple of questions for you. How many citizens do your police and fire departments serve? How many stations do you have and how would a large city be normalized against a smaller town in Energy Star or any other quantifying measure?

Emily Barrett: We have 143,000 citizens that are served approximately. We really have only one primary police station. We do have some substations, but they are not staffed in a 24-hour manner.

So the substations are really a small portion of the overall energy. And you ask about how to normalize the energy reduction between our size town and a larger town; is that what I was hearing?

Lauren Pederson: Yes, that was the last part of the question. Kudret might be able to answer it if you're not sure.

Emily Barrett: I would love to let him – let him venture a guess. I found just from talking with my neighboring larger municipality that their structure is quite different.

So the way things happen is different in a larger municipality. So Kudret?

Kudret Utebay: Well, if I understand the question correctly, it is very hard actually to normalize fire stations and that's one of the reasons actually why EPA does not have a 1 to 100 score for that space type.

We basically we do not have enough data to come up with what effects energy use most in fire stations. Is it number of fires? How many times the doors open and close? Number of trucks? Number of people working in there? We don't have that insight.

So right now, the only normalization fire stations will get is the latter normalization and square footage, of course.

Emily Barrett: You know – and we'd love to work with you if you'd like to use some of our data regarding what we've found drives the energy use. We've found some interesting discrepancies in some of our buildings.

So they might be a source of learning for EPA as well.

Kudret Utebay: Actually, that would be very interesting. I'll try to set up a meeting between the two of us to discuss further.

Emily Barrett: Thank you.

Kudret Utebay: Thank you.

Lauren Pederson: And then also, Emily, a question for you. Who or what type of firm will perform your assessments or will it be done in-house? And what method will be used for assessing the building envelope?

Emily Barrett: We are in the process of selecting the firm. We issued an RFP and we did get back three bids just yesterday.

So we are relying on the interns to collect basic information like HVAC age model, energy use profile, things of that nature that can be quickly garnered and we will be relying on an energy company.

Not necessarily an engineering energy company, but a company with engineering expertise to evaluate and retrofit the buildings. Was there a second part to that question?

Lauren Pederson: And then what methods will be used for assessing the building envelope?

Emily Barrett: Oh, the building envelope? Well, when I spoke the building envelope, I was speaking more to the new build. So I'm assuming they'll use sort of the conventional.

We are doing an enhanced commissioning over the new building and so I'm assuming that what that will look like is some pressure testing to assure that the building envelope is as we requested in the design.

But for building envelope for the other fire stations, I think that's to be determined based on what the proposals say.

Lauren Pederson: OK. And then for Tony, we have a question about how participants can find your pledge on Facebook or Twitter.

Tony O'Donnell: Each of the three municipalities has a Website and I believe it's [www.inourpower](http://www.inourpower) and then the name of the municipality and dot com. I could provide that, I guess, information in some of the follow-up – I can get that – the exact Website for the three to Emma and maybe you could include it in the materials that will be available for everyone.

Emma Zinsmeister: Sure. Yes, Tony, actually, we have links to all of those pages on your Climate Showcase Communities profile page.

Tony O'Donnell: Oh. OK. Yes, I just – I'm not exactly sure to tell you what – I think it's [www.inourpowermountclaire.org](http://www.inourpowermountclaire.org), I believe. And then it comes up and you see the different pledge actions that each of the municipalities have agreed to do.

Lauren Pederson: OK. Great. Thanks. And then another question for Kudret. How does energy cost and use information get into Portfolio Manager?

Kudret Utebay: Sorry. I couldn't catch the beginning of the question.

Lauren Pederson: How does energy cost and use information get into the Portfolio Manager?

Kudret Utebay: Again, another good question. There are three different ways to benchmark your buildings. The first one is the manual entry methods. You create your account and you enter information in the tool manually.

The second one if you are dealing with a portfolio of 10 or more buildings of the same type, EPA created Excel spreadsheets. We call them upload templates.



You put your information in the – in those spreadsheets depending on the space type you are benchmarking and you send it to building set – EnergyStar.gov. EPA will upload that spreadsheet for you along with your data.

This is only for new benchmarks. Excuse me. Once you benchmark your buildings and want to update your energy and water use, for example, we also have a process called, Multi to Meter Update and that works to a spreadsheet as well.

The third method is called, Automated Benchmarking. There are some utilities and third-party software providers that can help you with automated benchmarking.

Excuse me. The third-party software, there are several examples of them. I don't want to pick one against the other, but if you go to Energy Star Website and search for automated benchmarking, the first two links should give you enough information about automated benchmarking as well as list of companies and utilities that are providing this service.

I hope I answered the question, but if you want training on any of these methods, we have actually separate training sessions under [EnergyStar.gov/businesstraining](http://EnergyStar.gov/businesstraining).

Emma Zinsmeister: All right. Thank you, Kudret, for your answer. Unfortunately, we are out of time for today. So we will have to address the rest of the remaining questions in writing and we'll post those online with the remaining presentation, files and ideal file and that link is in the link to the site where you can get all of the files is in the intro slides that I shared earlier. So you can refer to that to find the link for the Webcast page.

So thank you to all of our speakers. Thank you to Kudret, Tony and Emily for sharing their work on resources.

If you refer to those files from the presentations when they're – when they're posted are the – are the copies that you received prior to the Webcast, all of those links are included. You can get to all the different Energy Star tools.

The information in pages for the Climate Showcase Communities Projects that were discussed today and please feel free to contact myself or any other presenters if you have additional questions or want to follow-up on their projects and resources.

So thank you for everyone for tuning in today. We'll be sending out notices on our list serve of upcoming Webcast topics as they're developed in the future and I hope that you will take a few seconds to fill in our optional survey about what you thought about today's Webcast and any topical interest you have for future calls.

So with that, thank you and we hope to have you join us again soon.

**END**