

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

Susan Morth: The topic and focus will be recently revised CPACE guidelines from NYSERDA and we are fortunate to have two experts from NYSERDA on the line, Karen Hamilton and Heather Clarke. Heather works closely with us here at EIC. They will discuss the revised CPACE guidelines and give us an overview. Karen and Heather appreciate that many on this committee are new to New York State. They will give a primer and overview of the guidelines then will move onto discuss several questions sent to us by Cliff Kellogg, Executive Director of the CPACE Alliance. Thank you Cliff for your active participation and for sending those questions in advance. Thank you Heather and Karen, we look forward to what you have to say.

Karen Hamilton: To clarify we were not asked to provide an overview of the guidelines so we don't have talking points prepared for that. We thought the focus was going to be on the questions we were received.

Susan: That's fine, my apologies so we will start with the questions and move on from there and focus on the changes.

Heather Clarke: June 1st we put out revised guidelines which included language pertaining to a gut renovation or construction of additions and that section was added. We clarified what a criteria for a PACE certifier would be and we added that information as well as information regarding resiliency. Those were the biggest updates to the previously published CPACE guidelines in addition to some formatting and grammar changes that align with other documents. We also combined documents in relation to the eligibility renewable energy system technology guidance. The previous three documents were combined into one. We also posted an applications for requesting approval of energy efficiency improvements and an application for PACE certifier. Then we posted guidance for calculating a cost benefit ratio and referenced those documents within the guidelines themselves. Those are the highlights and specific changes we made to the guidelines previously published on our website.

Susan: Thank you.

Heather: We have the questions previously submitted, so I guess we will work ourselves down the list.

Susan: If you don't mind, that would be helpful and then he we can then talk qualification?

Heather: First Question: Could NYSERDA elaborate on how its guidance interacts with local government ordinance and the program administrator role? NYSERDA has provided the statewide criteria for certification for an audit. Municipalities may use this guidance or set their own criteria.

Karen: The law doesn't specifically require that NYSERDA define an audit but in order to define who would be qualified to be an auditor. We had to take that step, but municipalities are not required to follow NYSERDAs guidance on audits.

Heather: The second piece of that question: Does NYSERDA recommend that energy audits have the same effect as the other items in the guidance? Going back to what Karen said, there is no requirement for NYSERDA to establish criteria for audits, we only did so to set the criteria for certifications for individuals to perform audits. A municipality may, by local law, provide the

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

certification of such contractors based upon criteria at least as stringent as the statewide criteria for certification adopted by the authority

Karen: I guess if anyone has questions you'll just jump in as we are going through these.

Genevieve with Greenworks: I have a question related to that question submitted by Cliff Kellogg, I guess a follow-up question. Will the municipality adopt the standards broadly, is that the understanding? Or will EIC be adopting these standards as their general baseline and that would be the default for municipalities that are currently in the program?

Mark Thielking: Our local law has been crafted to conform to 5L. Article 5L specifies standards and criteria included in that are local laws and such procedures for eligibility does require essentially those elements outlined in the guidelines. There is some flexibility related to that. In essence the local law does spell it out as to what the application criteria is and the eligibility and as the way that was crafted the municipalities wanted to see that it largely follows the guidelines as the guidelines change or are modified.

Genevieve: You mean the NYSERDA guidelines?

Mark: Correct

Genevieve: Okay, thank you.

Heather: Moving on, regarding recommending the criteria for energy audit question asked; can NYSERDA explain the technical standards? The standards are industry standards that are comparable to Ashrae Level II or III.

Karen: Again that speaks to the flexibility of the requirements around audits and the law doesn't require that NYSERDA establish anything but if there are comparable standards out there that a municipality would want to adopt that are industry standards then we think that is totally fine. Which leads to the second question: Would NYSERDA elaborate on how the property or capital owner will know what is a satisfactory energy audit? Although NYSERDA has established an adjusted criteria guidance document, the municipality will have to decide what a satisfactory energy audit will be.

Cliff Kellogg: If I understand correctly, is NYSERDA recommending that the municipality set a minimum of always having an Ashray Two or equivalent?

Karen: That is our recommendation: Ashrae II or equivalent.

Cliff: Is an Ashrae II audit necessary if someone is adopting one of the pre-approved energy efficiency improvements?

Cliff: I understand they are recommending only so the municipality can adopt a different standard for an audit if I hear you correctly, therefore, it would that minimum Ashrae II requirement for an Ashrae II audit apply if a property owner is doing a pre-approved efficiency improvement?

Karen: So the pre-approved measures are to indicate what is generally cost effective but the law states the financing be provided only for measures that are deemed approved through an audit. So say we are using pre-approved measures, does not replace an audit there still has to be some kind of audit that says yes you should go forward with these types of measures.

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

Cliff: I'm not sure I understand. What I was initially excited about the idea that a pre-approve energy efficiency improvement would not require an audit so it only clarifies clear cost benefit ratio hurdle. Is it possible to go a step farther and say that because it clears a cost benefit ratio than ergo does not require an energy audit or do you feel that's a requirement of the statute?

Karen: It is a requirement of the statute that something be found. So under 5L the requirement is no such loan shall be made for energy efficiency improvements unless determination determined to be appropriate through an energy audit like use a feasibility study for renewable energy. So an audit is required as a result of the audit they may say "no, you really don't need to replace your heating system" or they may say "yes, we recommend you replace your heating system" and then you can go to the list of pre-approved measures and say "this is the heating system we are selecting."

Cliff: That's interesting, I thought it would go the other way around. You would start with what your proposed efficiency project was and then you would get an audit to confirm that there was a clear cost benefit ratio. Your saying it's the other way around; that you start with an energy audit and from the energy audit your determine what equipment you are going to replace?

Karen: Yeah, I mean there are many things that go into an audit. Looking at what are appropriate measures to undertake, you have to look at the condition of the measures in the building and consider a number of factors before you come up with a scope that is appropriate based on the existing conditions of the home and the building and the energy builds and etc, etc. So the purpose of the audit isn't just to look at cost effectiveness it is to look at what is really needed in that building someone could be proposing that a heating system be put in place but as a result of the audit they may say "no, you know what this is operating well it's not that old it has a high efficiency so we don't think it's appropriate to replace that right now."

Mark: I just want to clarify how EIC would interpret this approach and I agree that most of the projects we are going to encounter have already determined there is a need to replace the heating system and thus an audit would be an evaluation of what is in the building relative to what is proposed to be installed in the building and the analysis is the audit in our view. I think the guidelines speak to that option. Single measure even multiple single measures are contemplated within the guidance and I agree thinking about what should go into a building then evaluating how that measure impacts that building is the audit and starting from that perspective is appropriate.

Karen: And that is fine, the guidance doesn't say what order these things have to take place in. All I'm trying to do is differentiate an audit from a preapproved measure. Preapproved simply deals with cost effectiveness. An audit confirms what is proposed, if appropriate or if nothing has been proposed yet, it helps to define what's appropriate so it's different than just cost effectiveness screening.

Genevieve: I had a follow up question on this topic as well. Preapproved measure versus the audit and Mark you answered the first part of my question which was what happens if a contractor comes forward to the building owner with a single measure and they have no interest in looking at a full building energy audit but would rather qualify the one measure they already had in mind to install. So, I think you answered that. One of the questions I had was the energy audit specification didn't really clarify whether or not the audit will need to state projected energy savings in certain metrics like kilowatt hours or BTUs but the recording requirements

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

under the RFQ sort of suggest that would have been included in an audit, so should we understand that when an audit is done under this program whether full building or single measure one outcome of the audit is that there would be projected annual energy savings for the measure(s) being installed. Will that be a requirement of the audit? Does my question make sense? Does the audit just have to show the measure reduces energy consumption which is the definition of an eligible improvement under the NY law or does it simply have to say, we looked at it and its appropriate and it will reduce energy or will it have to go one step further and actually specify what the projected energy savings will be?

Karen: I think that really is a question for Mark in terms of what the local law would require.

Mark: Aspirationally, I think we would want to see the projected savings of that measure. I think the customer is also going to want to see that. Is it required? No, but again aspirationally, from the perspective of viable projects and dealing with the client's interests in seeing that. Again, depending on what it is, this may be an emergency repair--don't even care about the savings, they need to fix this thing right away and we are on board with that. If it is a more effective measure and prequalified and you do an analysis based on the audit standards and it doesn't include a savings projection, I think that acceptable. But at the same time, there are situations where, aspirationally, we want to see that. Because it's more than just emergency repair.

Genevieve: Thanks, I totally understand that answered my questions. Thanks, Mark.

Ethan from PACE Equity: Maybe building on that a little bit and taking it to the next step understanding the guidelines have pre-qualified items, but you can also fund items that have the CBR of one or greater. Am I reading that correctly? If it is a pre-qualified item there is no CBR test required.

Heather: Yes

Ethan: I apologize if this already got asked. Is there a list and I'm looking at the guidelines at the top of page 9, there's a whole bunch of different places where things meet the pre-qualified improvement list, is there a master list of what all those items are?

Karen: No, those lists change frequently, it would be administratively impossible for us to maintain a master list. We really need to point to many of these third party resources that maintain their own lists and we do that for other programs as well, we point to those lists.

Ethan: It's a little challenging to know what is qualified and what is not qualified or with having to look at constantly evolving lists. I guess that is my concern.

Karen: Understood, but for us to main a comprehensive list in light of all these lists changing, would also be administratively challenging and it is not something we can do. These lists evolve. I suppose if a PACE lender decided to freeze a list in time and say these are the only things we'll finance, that would be up to you.

Ethan: Ok.

Robert Fischman: I wonder if you could talk briefly about the NY Technical Resource Manual and how that addresses lists of pre-qualified measures to give a little bit of guidance to people who are not familiar with working here in New York State?

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

Karen: Because the programs that we run right now use modeling in the residential sector, I don't work in the commercial sector, we don't use the technical resource manual that much. My understanding is the technical resource manual provides calculations for how to determine if something is cost effective and as a result of using those calculations the utilities have identified a number of measures that are deemed to be cost effective and so they don't have to recalculate them every time they use them. What we can do is ask our commercial team members to expand on that little bit and see if they can give you a better answer. Unless there is someone on the phone who has broader experience with it?

Robert: Thank you that would be a good place to start.

Cliff: To be clear for myself, a whole building audit is always required?

Heather: No, that actually leads to the next question. While NYSERDA encourages the completion of a full assessment, a single measure audit is acceptable provided it meets an Ashrae Level II or better or comparable. In addition, the municipality may consider alternative calculation methods such as an automated audit software and those methods are appropriate provided the energy audit identifies improvements that comply with the technical standards. We do encourage the full assessment, but a single measure is acceptable.

Karen: Very often, somebody is just needing one thing; they need to replace that heating system, the example that Mark gave previously that it failed, they have to get that done. So just doing an audit on the heating load calculations and everything else health and safety, whatever is part of a typical heating system part of an Ashrae Level II audit would be acceptable.

Heather: Does that answer your question, Cliff?

Cliff: It does, it sounds like there is a lot of education to do for municipalities so that these single measure audits are as easy as possible.

Heather: We'll move on here. If there are any more questions you can always interrupt or ask them at the end.

Susan: I'm sorry, if I can just jump in. Cliff, I was left wondering about your last statement. So when you talk about the municipality, that is us, EIC, right? I don't want you to walk away and think that every municipality is weighing in on this because EIC is the program administrator for all of these municipalities, so you really mean us. So, offline, if you have questions or issues, Robert Fischman who is on the call, is an engineer and our expert, we can help out no problem. Thank you.

Cliff: Thank you Susan.

Heather: NYSERDA's approval of entities as a certified contractor performing PACE energy audits and the question was: Are there additional requirements professional engineers such as experience with mechanical, electrical, plumbing, PE license inclusive? And the answer is that NYSERDA purposely added the language that a New York state license PE who will sign and stamp the audit with the thought that an engineer will not sign and stamp something to put their license at risk if they weren't familiar or knowledgeable with the technology analyzed in the report. So, additional requirements are not required. The second part of that question was: Must the baseline auditor be independent of the installation contractor? The answer to that is no. As
Page 5 of 10

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

long as the installation meets the specifications recommended in the audit including the requirement to ensure the installation of the equipment complies with all laws, codes, industry standards, and all other rules or regulations. Contractors should also be able to objectively make recommendations that will not negatively affect the cost savings associated with it and the financing application.

Karen: and by the way, that's an opinion. There is nothing in 5L about the installations or the installation contractors or NYSEDA's requirements around that topic so that's our recommendation, that's our opinion on the topic but municipalities can make their own decision on that.

Heather: Moving on, to talk about cost effective criteria for energy efficiency improvements: The capital providers especially appreciate the list of prequalified technologies that are deemed cost effective. Could NYSEDA explain how this list will work on projects involving multiple prequalified energy efficiency improvements? We asked for clarification on that and Cliff, I believe you have responded to Susan and said that an improvement is deemed to be cost effective when it's included. So it must be a project of multiple pre-qualified energy efficiency improvements is pre-qualified but how does NYSEDA access CBR of a project of some pre-qualified energy improvements that are not pre-qualified. I guess there are two parts to the answer to that question. The use of the cost effectiveness calculation to determine that the non-pre-qualified improvement is cost effective and nothing has to be done regarding the pre-qualified measures. Now, cost effectiveness could be determined at the project level as opposed to the individual measure level. It is possible, based on the definition of an energy efficiency improvement in the law; in that case the cost effectiveness calculation would have to be done on the entirety of the improvements including ones done prequalified using the average life of the measure.

Karen: Was that clear? The two different options there?

Cliff: I think so, yes. It sounds as though you're reading from some talking points, I'm wondering if you will be able to send us those talking points or will they be published as an FAQ?

Heather: I can send them back to Susan and she can post them as an FAQ or distribute them to the broader group.

Susan: Thank you so much, we'll do that.

Genevieve: I have a question and I apologize, I realize that we sort of moved past this topic. I thought that question was coming up later. It's going back to the question of certifying auditors and the question that was asked about professional engineers. There was more color here given about a comparison of the State of Texas and four commercial PACE programs nationally. It is generally the practice that a contractor who is installing measures on behalf of the building owner. So presumably the contractor or building owner are the ones that determined the scope of work that they wanted to install in the building and then there is a third party which is called a technical reviewer or a third party reviewer quality assurance provider that reviews the energy audit or study that was conducted by the contractor and then they confirm whether the proposed scope of work meets the requirements of the program and I was a little confused about this reading the NYSEDA guidelines because the language was a little inconsistent. There were sections that said contractors are encouraged to do full building audits but the certifier in all cases will look at the following. I was also confused if the certified certifier had to be a third

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

party but I did want to clarify here what you guys are looking for is for an audit being a determination of whether that piece of equipment needs to be installed in the building based on cost effectiveness and eligibility? You want this third party and/or contractor to conduct an audit whether or not that is refused by a third party. This certifier is very much doing an energy audit, they are not reviewing a scope of work or study that's been conducted by the installation company. Can you just further clarify that one more time? I just want to ensure I understood that. That is different than what we are using in other states.

Karen: The certifier reference in the guidelines is someone to certify auditors. Saying this person is eligible to perform audits that is who the certifier is. The certifier is not reviewing the audit themselves. Now, if a municipality wanted to use a professional engineer as a person to review and approve audits that would be their option which is what it sounds like with the scenario you are describing but the language of the certifier in our guidelines specifically applies to a person who deems someone eligible to perform audits.

Genevieve: Right, so in my experience, most energy contactors and I'll exclude solar for the moment only because the lists for solar certification are widely used by solar installers but my experience on energy efficiency is that 80% of contractors do not hold any of these certifications. The vast majority of businesses that will be proposing some improvements to commercial properties under this program will not meet this requirement and for that reason there would need to be a third party that conducts the audit to meet this requirement for this program. So what I'm trying to understand and make sure I have it right here, the role of that third party is actually conducting an audit as opposed to review the proposed scope of work put forth by the contractor and the reason it is an important distinction for me is that many of these standards for example the investor confidence project, if a third party is reviewing a project they cannot conduct the audit for that project themselves or they would be in breach of that standard. So essentially a third party thus if analyzing a measure looking at the appropriateness of it and critically anyone that is estimating energy savings that would result from that, they cannot also be responsible for providing a quality assurance role in that same project. So, it looks to me that the standards here that you have a contractor who wants to install a heating system and what we need to do is get an auditor in there who has been certified by one and they need to conduct an actual audit of the contractor's proposed scope of work but then no one is doing a separate review of that audit coming up later? It's going back to the question of certifying auditors. As long as the audit and auditor meet the original standards there then you accept that they've done qualified work. I want to make sure I'm understanding that correctly.

Karen: There is requirements for a municipality to confirm the performance of installation. How they go about doing that is up to them. There's no requirement by NYSERDA to establish that kind of process. 5L doesn't require us to establish that kind of process. So that would be something that the municipalities would.

Genevieve: Ok, Mark and Susan if we are submitting a program in New York and the project was initially put together by a 'Man With a Van LLC' and they want to swap a boiler out of a building, what we need to do is have a certified auditor review that scope of work and provide an energy audit for that measure and then that is it with respect to the sort of pre-application, pre-installation requirements because the audit was conducted by a qualified entity. So there wouldn't be an additional third party review of the audit?

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

Robert: You are absolutely correct that is exactly how we would approach it. In fact, on the bottom of page 5 the guidelines do address emergency replaced failed equipment or in recognition of exactly what you are saying, the property owner may simply wasn't to move forward with one particular measure by using the preapproved measure approach those are deemed to be most cost effective.

Cliff: And that is all consistent with what I've heard so far but I have one friendly asterisk, if I heard Heather or Karen correctly then it doesn't necessarily require there can be substitute measures that can qualify to an Ashrae II audit so there may be other acceptable ways to perform that audit that are equivalent but not the same as an Ashrae II audit.

Robert: For example Energy Star savings calculation tools are specifically identified here in the standards and guidelines.

Karen: That's correct.

Cliff: Thank you that's what I wanted to hear and double check.

Mike Raymond: Unfortunately, I wasn't able to make the last call. We're a developer, primarily in apartment space and my question is more project specific, if that's okay? The first question we had and trying to get our arms around, we are trying to get our communities down the road to get as close as possible to net zero in terms of metering with regards to electricity to the tenants that pay the national grid bills as possible and we've been talking to multiple solar companies and the biggest issue we run up against in terms of putting solar on some of our buildings is they either don't have phase three power going into the site or don't have the roof surface area because it might be a midrise property that won't bring down the usage that much. So we've been in talks with, we own some properties and land around the Albany area where most of our apartments are that is really brownfield land and there is no real use to it unless we go through the brownfield process. So we've been in talks with groups about possibly doing solar on those and net metering off into different communities around the area that we own. Would PACE work is in that and I kind of know that this gets added to the tax role but let's say the property is in Rensselaer County and we have properties all around the capital region could PACE easily fit into that or is that just too cumbersome and complicated?

Heather: That's a question we will have to defer to our counsel on the definition of renewable energy systems the way it is described here means 'when an energy generating system or the generation of electric or thermal energy to be used primarily at such property.' I'm not sure how to interpret that, so we will take that to our counsel.

Greg Hale: I thought we got the "primarily" dropped from that language specifically focusing on trying to encourage facilitate PACE for this type of a project.

Bob: That is correct, the amended Article 5L went into effect when signed by the Governor last September that did eliminate that. I think the word "primarily" had been in place before the concept of net metering and community solar were ever even considered.

Susan: So you are correct, it's been dropped.

Bob: I would be happy to pick up the conversation with you separately to talk about how that can happen. There are a number of rules and regulations with the New York SUN program and

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

PSC Guidelines with respect to what can be net metered in what zones. I'd be happy to pick up that conversation separately.

Susan: We will definitely answer your question Mike, and be able to help you offline. Thank you so much.

Heather: Moving on, there was a suggestion of a recommendation adding an incremental cost of alternative financing as a form of savings to be accounted for based upon the property owners estimate of what alternative financing might cost. We will consider that for the future or in the future we will not look at that at the moment it is a consideration in the future and their follow up was: Could NYSERDA explain what is included in the definition of societal benefits? The societal benefits we are looking to include carbon reduction benefits, health and safety benefits and reduction of greenhouse gas emissions are the inclusion of societal benefits would have to be validated and submitted to NYSERDA for an approval and is up to the municipality as to whether or not the benefits could be included in the PACE financings.

Karen: Right now the only thing we can readily calculate is the greenhouse gas carbon reduction health and safety benefits are certainly something that is being researched heavily across the industry when there is something we can quantify objectively around that we will add it. If others have suggestions on how other benefits could be quantified certainly send that to us so that we can have our analysis group look at it.

Cliff: is the calculation of greenhouse gas emissions qualified somewhere? Is that what I seen in the CDR addendum?

Heather: Yes. Moving on to the verification report and calculation of performance. The question was concerning if the reporting regulations is the responsibility of the program administrator and or the property owner. The response is that the municipality or their agents are required to verify and report and municipalities may set up a process that involves other parties if they choose to do so but they are ultimately responsible for the verification and reporting. The follow on was, the data that NYSERDA describes are collected when the project is installed, is this correct? And that is correct. In monitoring future performance, what we intend, we do not NYSERDA, require or expect any ongoing monitoring just that within the two year time period set forth in the guidance that the project should be inspected to verify performance. Inspected or in some other way performance verified. If you want to use utility bills, whatever remote monitoring, whatever you plan to it, it is a onetime verification not an expectation of ongoing verification.

Cliff: And that's verification of installment, installation or is that verification of some level of energy savings?

Karen: The law requires verification of installation and performance. I would interpret performance to mean it is achieving the savings that it is expected to and its operating properly with in the specifications of the manufacturer that's up to the municipality to define how they want to verify performance.

Susan: We have some comments. EIC represents our municipal members and we will interpret these guidelines. We will host a second call with the group to share our interpretation of these guidelines as well. We don't want you to feel as though this is the last pass here. Please continue, thank you.

**EIC C-PACE Advisory Committee
8/2/18 Meeting Minutes**

Karen: That was the end of the pre-submitted questions. Are there any other questions people have?

Cliff: I have a comment. I've shared with Susan before. Not sure if it is the responsibility of NYSERDA or EIC, my suggestion was that a good practice might be to develop an overall handbook or manual that describes how all the different documents fit together into this approval process and the audience for such a handbook would be the property owner and there might be more technical appendices to the handbook for any of the more technical audience members but I think there should be one if you will overall document which summarizes how the PACE approval process works. I've seen two examples of such documents, there are probably more than these two but the two I've seen are pretty good, is one the California CSCBA Manual and the second is the Texas PACE Authority Program Guidelines.

Heather: So I would say that falls to EIC?

Susan: Yes, that is us at EIC, Cliff and we agree with you that is necessary and we will be developing that handbook.

Cliff: Thank you.

Susan: Any further questions for Karen and Heather? Thank you so much Karen and Heather for joining us.

Heather: If any questions come up after or during or later, please go ahead and send them along to us.

Susan: We will do that

Heather: We will send you the documents that we put together with the responses.

Susan: Thank you so much. We just have one or two other items. We are working on a webpage for approved pay when received capital providers. We looked at a couple of other states webpages. We are encouraging at this point anyone that has not responded to our RFQ to please do so. You can call me and I'll walk you through a simple way to respond so we can approve you as a capital provider. We do have people with projects interested in taking a look at that webpage. So we would like to encourage you to get to us with your RFQ response. Thank you. Also, I'll announce the next call is slated for September 20th at 11:00am and an invite will go out shortly.

Cliff: When you send that out and circulate the answer that NYSERDA provided today I'm sure you'll let us know what form that will come.

Susan: As soon as we receive that document we will forward it to everybody on the advisory committee and if there is any one on the call that wants a copy that is not formally on this committee just send me an email. If there aren't any other questions or others issues then thank you so much.