**Measuring 90% Compliance**
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Presentation Video Transcript

INTRODUCER: Linda started with the Pacific Northwest National Laboratory in 1992 and started in pen computing and voice recognition technologies. However, very quickly, we discovered Linda's capabilities in software development. So, we got her to start with the very beginning of REScheck and the COMcheck afterwards. So, one of the original developers and since then, she has become the manager of all of our software tools, every variation of REScheck and COMcheck, that I am sure most of you are quite familiar with. However, I was very pleased that Linda agreed to take on the Straw Man Activity and that is what the focus of this afternoon is going to be on the topic she is going to be giving. It is hugely exciting in terms of really starting to focus on compliance. So, Linda and her team at the lab will hear about that and then we are going to hear from some of the panel members shortly thereafter. So, Linda, I am going to turn it over to you. Thanks.

LINDA: So, everyone expects you to be able to change your slideshow really quick. Alright. This looks like it. Okay.

INTRODUCER: Linda? Linda, pull the mike towards you. Thank you so much. I am back here. See? I am talking to you back here. Hi! How are you doing? Good to see ya!

SHOUT OUT: You call that voice recognition.

LINDA: Recognition. No. It is sight. I did not do the visualization part of that. Anyway, I am glad to get the apology about being left off. This talk is somewhat controversial and I thought maybe that was intentional in case this did not go real well, then they could have nothing in writing that claims I am part of the program. I also, you will see, that this is about the code compliance measurement portion of the recovery act and I did not get the memo about it being changed because of the AARP problem with the acronym. So, this still says ERA. So, did not get that updated, but we will fix that. This is a panel and so, I am going to start off with some information about some of the work that the building codes program is doing to help develop tools and procedures that the states can use and adapt for measuring compliance in the states and local jurisdictions. Following that, we are going to have some guest speakers also in this session and the first one will be Erik Makela**.** And Eric has spent over 20 years working in residential and commercial energy and efficiency and codes and standards. He served as the training coordinating for the building energy code programs. So, he used to work for PNNL back in the old days.  He was the senior educational programs administrator for the ICBO and he has trained or presented on codes in over 22 states.  He has COMmanaged each residential and commercial energy code baseline studies in Nevada, Iowa and Indiana and that is the main factor of why he is here talking to us, because those studies have a lot to do with measuring compliance in the states.  He also served on the IECC development committee, which included the development of the 2009 IECC.

Following Eric is Mike DeWein, who is going to speak to us and Mike has served as a technical director for the VCAP program since 1995 and has provided technical support and direction to VCAP and its programs in over 35 states.  His current projects include the development of the advanced energy codes, training and outreach programs for state and municipalities.  He has worked as a technical specialist at the New York State Energy Office and he assisted in developing and was the first trainer for the New York Star Program, which was one of the earlier Hersh programs.  He is here today, going to be talking about a couple, two round tables that he has through VCAP and through the energy foundation put on that pertain to measuring compliance in the states and so, he is going to present the discussion and findings from those round tables.  So, not only did Diana forget me, but she also stole my quote in her introductory slides, which was from the New York Times article that came out just this month that claimed, any energy building codes are the single biggest opportunity to save the environment while saving the consumer money.  It went on to say that no single policy change could do more to save energy over the long run that building codes that make saving energy the law and the law is kind of a good segway into this session, because I know we have all seen laws that were not enforced and that are not very meaningful.

So, you have probably all seen the Recovery Act legislation.  This is just a quick summary in case anyone has not.  Of the three items listed in there that the states will do, one of them is divided into three parts and that is adopting the most recent residential code, 2009 IECC and also ASHRAE’s standard 90.1 2007 and develop a plan to achieve 90 percent compliance within eight years, include active training and enforcement in that plan and an annual measurement.  So, these are, that last bullet is the part we are focusing on in this session and these are two wordings of that legislation.  The top one was in the Recovery Act itself and then, the state energy program funding opportunity had similar legislation, but as you can see, it is much shorter, looks more like a summary of what the original legislation said and I only bring this up to kind of point out the part in red that says the 90 percent is a new and renovated residential and commercial building space.  That part of the legislation has had some impact in some of the decisions that we have come up with.  So, the objectives of the legislation itself, the recovery act is focused on creating jobs and retaining jobs and the SEP has always been focused on reducing the energy costs and consumption and so, even though a lot of our effort in developing tools has been, how do you measure compliance in the states, we feel that this effort is about a lot more than just measuring.  It is about improving compliance while we are out there.  Improving it through training and awareness, because the legislation does specifically site training programs, through better enforcement, through process improvements at the local jurisdiction and it will also involve increased man power and therefore, create jobs.

For example, trainers and inspectors, evaluators, because what we are proposing is an evaluation of buildings in the field. We also feel it is a great opportunity to better understand the compliance rates in the states. You have heard a couple, including Sean's estimate of, you know, that talk about return on investment and talk about potential savings if the bar is raised in terms of compliance. Those are guesses. It is pretty hard to know exactly what the compliance rates are in the states. This is also an opportunity to understand where code requirements are a barrier actually, where they are not working, where maybe the code itself needs enhancement in order to make it more understandable. There are code requirements that perhaps just are not well understood that could be enhanced or that just are not enforceable.

So, this is a chart I pulled from an Oak Ridge study, Oak Ridge National Laboratory, which they did on the state energy program. This is for the year 2002. The report came out in 2005. I brought it up to show you, what this first chart shows is the expenditures by states in the SEP program on these. They divided the activities in the program into these various categories and so, the codes and standards came out seventh in terms of how much money was spent on that activity. Note that workshops and training came out second and then the second graph shows the estimated annual savings from those activities. So, you notice that codes and standards came in second in terms of estimated annual savings and workshops and training came in first, even though neither of those have the most money spent on them. In fact, codes and standards was number seven. I just bring this up to show that these two programs both are very much a part of what we are talking about when we are talking about measuring compliance in the states and that they do, at least according to this study, have a major impact.

The building codes program has some objectives also in the work that they are doing for measuring code compliance. That includes to foster uniformity across the states when they are endeavoring to measure code compliance. That uniformity is not only important in, you know, having a comparison of apples-to-apples when those numbers are reported, but it is also important if the data is gathered right, there is a whole lot of additional information that we can gain, but we have to make sure that it is gathered in a way that it makes sense across states, regions, climate zones. We also wanted to eliminate the need for states to have to start from scratch in this effort. Quite frankly, a lot of the studies I have looked at, I bet a good portion of the effort going into those studies was figuring out a methodology for how to do this and so, we hope to provide that methodology and tools for states to use if they choose and to adapt to their own use if they choose. And then, we also hope that we can help enable the collection of additional data that would be very useful to the program, to the country and looking at code compliance.

So, activities to date. We started out by reviewing a lot of studies on measuring code compliance. There are actually not an overwhelming number, but they are all very large. They are about this thick and after reviewing those, we came out with what we called our Straw Man version one and that was released in March of 2009. We sent that out for public review... Not public review. We sent it out to stakeholders. It was a somewhat limited distribution. We tried to include all states. We included some industry stakeholders, the code organizations, and we asked for feedback on that. It was sort of just an effort to get a document out there and to pole people to see what they thought. That first document proposed a three tier approach to measuring compliance. The first two tiers were very focused on serving the jurisdictions. So, looking at how much training the inspectors have in energy codes.

What is the level of plan review that they do. You know, do they require compliance documentation to be submitted when they are submitting for a permit and then our third tier was all about measuring compliance in the buildings in the field. By the way, in my presentation, some of the feedback we got on our early on was that terms like auditor and inspector were somewhat, they had connotations that maybe were not... that we did not want to use. Auditor, you know, like an IRS auditor, that is kind of a negative connotation. Inspector, we think in terms of the code officials and those might not be the folks that are actually doing the evaluation in the field. So, in this presentation, we decided to use the word evaluator and evaluations. It means pretty much the same thing. Alright, so the feedback we got on that was that even though evaluating the process that the jurisdictions are using is valuable, the Recovery Act will require evaluation of buildings to see if they comply with the code. And by the way, we looked at some existing programs such as ISO's building codes effectiveness grading scale and we looked at some studies done with telephone surveys and those are all based on rating jurisdictions based on these types of surveys.

So, we do feel there is value in that, but by and large, the feedback came back that we really needed to evaluate the buildings. Also, that came back, that we should involve the design and construction industry, the build community, in this effort. That we should not just focus on the jurisdictions and the jurisdictional staff. That we should provide training to include training in corrective measures that we find that, you know, uniformly, there are certain code requirements that are not met in the field, focus our training on those and followup as part of the process. And, the feedback said that the building codes program should provide detailed methodologies, which would help ensure national uniformity and comparability of results. And by the way, this first Straw Man was very high level. So, there was not a lot of detail in it. So, based on that feedback, we came out with a second Straw Man, Straw Man revision two, and that was released just in June. It was significantly revised to focus on the evaluation of buildings in the field. It was sent out to a broader distribution. Just about everyone we could think of that might have an interest in providing feedback. Like I said, it focused on an evaluation of a statistically valid sample of buildings in the field. It did continue to propose looking at the processes used in the jurisdictions as a possible way to do an annual measurement. It also recommends, perhaps, spot checks as a way to do annual measurement, because if you recall, the legislation says a plan to reach 90 percent within eight years and annual measurement. So, it also reported that states need to show progress towards that 90 percent goal until that compliance is demonstrated and then it stated that once the 90 percent compliance is demonstrated, there is no further need to continue... There is no more requirement to continue measuring, at least within the Recovery Act.

Now, the program recommends that that measurement continue, because there are a lot of things that change in the jurisdictions. The officials change, the code in the state changes, the builders come and go and some previous studies have shown that it is not always an upward swing you see within the jurisdiction. So, there is no guarantee that once they reach 90 percent, that they are going to stay there. But, because the Recovery Act is a one time infusion of funds into this process, the DOE did not really feel justified in saying that once you meet, that you would have to continue with that annual measurement. We also got some feedback that using building performance based on utility data would be a valuable way to measure compliance and this, our second Straw Man, while we think that there is some valuable information in doing that and some of the studies actually do look at that, we decided that it is outside the scope of this effort. The codes are mostly prescriptive. There is no real way to link a building's energy usage after it is built to the code. Occupant behavior, climate, type of building use, it is just... The correlation just is not there. Nonetheless, we will have a section on related activities that might talk about ways that you could look at utility data, because it would be great to see how our buildings are performing in the field. So, we gathered all the feedback from the second Straw Man. A lot of it fell into categories or topics and what we plan to do is address each one of those topics and these are the topics that kind of fell out from the feedback. We are coming up with what we are calling topic briefs for each one of these. The top five were pretty much done with the detailed resolutions on these and we will be posting them online as we get the others done, which would be probably within a month. I would think most of them would be done. Those also will be posted online.

We anticipate that these topic briefs will then roll into our final guidance. They address... The feedback came back as some of them with suggestions on doing things this way or that way and others, a lot of it was just questions. Like, provide more detail for this or that. So, you will find these topic briefs are a combination of justifying why we made decisions about certain things and also, clarification and more details into all of the topics. So, the first one was a rather controversial issue. It is how you measure the 90 percent compliance and it pretty much fell into two camps. Now, these two methods that I am going to describe, there are lots of variations on those, but at a high level, it really boiled down to these two methods. Method one, a building passes or fails all of the code requirements and if it fails any of them, it fails and then you must have 90 percent of your buildings evaluated pass in order to achieve 90 percent. Method two assigns a percent compliance to each building and then averages those to come up with a compliance rate. If you look at my illustration at the bottom, this could be the same set of 10 houses. You can see where everyone that is not at exactly 100 percent under method one fails and under method two, those percentages assigned to each building are averaged and you can see that this is pretty impactful difference in the result.

So, our guidelines, which are, as I mentioned, voluntary, but they are going to come out and suggest that we use method two and the reason we came up with that, there was really quite a number of reasons. One of them is we believe it provides a much truer understanding of the compliance rate in a state. You could have two states and all of the buildings in one state could be very close to complying. They could be very good performing buildings, but maybe there was one code requirement that they just unilaterally missed. They would all fail and that state would have a very low compliance rate. Compare that to a state that perhaps had very poor buildings that failed a lot of measures, those two states may have the same compliance rate and we did not believe that that really provided a true understanding of what is going on in that state. We also felt that there is a lot of subjective criteria in the code. It is not a fault, necessarily, of the code, but it is just part of the problem and evaluators could go out and interpret a code requirement differently. Even though that is a problem in either methodology, if the whole building fails because some evaluator took a subjective criteria and said that building fails, that is pretty, pretty high penalty for something that is somewhat subjective. Whereas, if they missed one code requirement, maybe that drops their percentage to 95 percent instead of 100, that has a lot less impact.

There is some, you know, in the topic brief that we published, there are some logistics that we felt method two that are resolved and we have also felt that the data completeness would be better with method two. And what I mean by that is we did not want evaluators going out there and hitting the first code infraction and saying, it fails and stopping. We want to collect all of the information about these buildings that are evaluated that we can. So, here is a few examples of what I mentioned in the top, there is a code requirement in the IECC about equipment sizing and it in turn refers to the IRC, which in turn says that you have to have AKA calculations for equipment sizing. Now, we believe that a large number of buildings, especially residential buildings, will fail on this code requirement alone. It is not that it is a bad requirement. There is a lot of energy loss by improperly sized equipment, but, you know, failing buildings on this requirement alone is going to be problematic in terms of if you were to fail the entire building for that one reason. Another example of that is the fenestration, the NFRC labeling, that is requiring for site built windows now. We are told that in the commercial buildings, that a lot of buildings would fail that because of problematic issues with having site built fenestration labeled and then in terms of the subjective criteria, everything installed according to manufacturer's instructions, that is a little bit subjective. The visual inspection of 12 of the caulking and sealing items. Yeah?

QUESTION: As far of the compliance, you say that you do an average of the items for the compliance and then average that into a 90 percent. If you do that, you have the risk of having important items not be compliant within the code, which would be a great loss. For example, if you have a measure, and energy saving measure that would represent a 20 percent against the other small measures and that is one of the non, I mean, the 70 percent or whatever and then you average that, you say that you are 90 percent compliant, but...

LINDA: Okay. I understand the question, that some code requirements are much more impactful than others. That is a good segway, because I do have a slide on that. We are intending to weight the requirements. I am going to say, you know, I am going to talk a lot today like this is the way it is. Please keep in mind, this is our guidance, but we do intend to weight those items. So, let me get to that slide that shows what we have proposed for that. So, anyway, back to the subjective criteria. Words like rigid, opaque and weather resistant or provide sufficient space or durably seal, ducts shall be sealed and restrict infiltration. These are all examples of criteria that are somewhat subjective. So, this, we are now getting into topic brief two and there were actually two parts to this that dealt with above code programs. The first one was, one of the feedback was to include the impacts of above code buildings to sort of weight out, to sort of leverage against the below code buildings. So, for example, if you had, you know, 10 buildings that were 50 percent above code and 10 buildings that were 50 percent below code, those should... They should be able to leverage those above code buildings and come up with the higher compliance metric. We are not going to recommend this as part of our policies or our guidelines. The reason is, is because this is about bringing buildings up to the baseline, which is the code. It is great when there are buildings being built above code, but it does not tell us anything about the opportunity to bring buildings up to code that we are missing and so, in that example, where you have got 50 percent above and 50 percent below, if you come back and report 100 percent compliance, that does not tell you anything about the opportunity to bring those 50 percent up to the baseline where they should be. It is also... It would also be very problematic in measuring how much above code a building was. So, we are not going to recommend this and the second part to this was to include and leverage building evaluations performed as part of above code voluntary programs. HERS, Lead, Energy Star. This is sort of a yes and no. Yes, we will try to leverage those programs where ever possible. If there has been, for example, a HERS inspection on a building and it is part of the sample set, we hope that maybe we can use some of the information that has already been gathered on that building; however, comparing a HERS home directly, a rating that a HERS home has, directly with the IECC 2009, is very difficult since HERS is based on the 2006 and the measurement is quite different, a quite different process. So, we will leverage it where we can. We are trying to work with some of the leaders in some of those programs to figure out ways that we can leverage the work that they are doing. Now, the sample size and makeup. This was a very popular question on the feedback. What will be the sample size? What will it look like? So, before I start, are their any statisticians out here? Could you please leave. No, we do have a statistician on our team. That is not me. So, I am going to do the best I can to kind of present his results. Well, what is your confidence level? Confidently not going to leave. Okay, well, we will give it a shot. First of all, the sample size and makeup topic consists of, you know, what populations are we sampling, what types of buildings, how is the sample size established and what is the process for generating this sample and also, provisions for nonparticipation. Because what has been found in previous studies is you cannot always get on the building to do the evaluation. Builders may fear some kind of retribution or maybe they are too busy, they do not respond. So, that probably needs to be incorporated into your sampling. So, we came up with two populations. We feel that commercial buildings and residential buildings should be completely separate populations and that commercial renovations will be included with commercial buildings and residential renovations will be included with residential. We would like to see the samples distributed across the climate zones in the state. The sample should include subsets of building types and attributes. So, for example, in residential you should get not only some residential renovations, but some single family and multifamily. In commercial buildings, some simple commercial and complex commercial, varying building use types and again, some renovations. So, our statistician, after a lot of work and bringing him up to what we are trying to accomplish, came up with a sample size of 44 commercial and 44 residential buildings in the state. We would like to see these distributed across the climate zones and so, if this was a map of the climate zones, you will see the worse case will be five climate zones for two of the states. Some of the states have only one climate zone, so there will not be any worries there. We will, by the way, assist with developing such a sample. We will hope to have tools that will help develop the sample. The distribution across climate zones will be activity based on building start information, permitting information, but we do think it is important to at least cover, at a minimum, a few samples within each climate zone because the code requirements are different. Also, then, distributed across building jurisdictions within those climate zones. This does not mean every jurisdiction. That would be a huge task, but again, we would look at building starts and activity and choose the largest jurisdictions. Yeah?

QUESTION: What would you do in the case of a state, the state has adopted different climate zones than the ones that are included in the IECC? There is an example, New Hampshire is an example of that.

LINDA: Right, and they have how many climate zones that they have adopted?

QUESTION: They have one climate zone across the state.
LINDA: Then, I would say that is one climate zone, but quite frankly, a lot of this is very detailed and we anticipate working with states, with their individual issues and problems, because no states are going to be alike in this and so, you have heard mention of some pilots. We are hoping in those pilots to get a lot of variation, maybe run four or five pilots that have different experiences, both in what their code enforcement is like, how many climate zones and we will more hand tune those sample sets for them and hopefully have a better feel of what works and does not work with the other states. But I am guessing that it will be a lot of one-on-one with the state. So, those samples will be randomized to have different buildings uses and attributes within those climate zones and jurisdictions and we probably recommend that you increase that minimum size of 44 each because of nonparticipation. You are probably going to go out and get turned down on some of them, or it might be that you start with those 88 samples and then you have to go back and get a few more because of nonparticipation. The sample sizes, if you wanted to have an area with a statistically valid sample that was smaller than your state, you could do that if you increase the sample size within that area and that might be of interest, because I know, in some studies, there were utility areas that were interested in having a statistically valid sample just within their utility area and they put in some extra money in those studies, the utility did, to help fund the extra samples. So, it could even be someone, you know, New York and New York City wanted to have its own statistically valid results. They could do 88 samples in New York City alone and then that would be considered valid. Otherwise, the information reported on jurisdictions and cities within the state are not valid in terms of, you know, you cannot look at those and say that is a statistically valid result. So, we anticipate working with states to modify the samples where needed and there is the potential for needing more samples if the state variation is too high and let me explain what that means. This is a curve showing the sample size on the x axis and what they call a standard deviation on the y, which is impacted by how much the spread of the resulting measurements are and so, we chose a fairly conservative deviation with 44 samples and this shows some histograms, the spread that would still fit within that amount of deviation. And, you can see, they are pretty spread out. Probably more so than you would find in most states. However, if the deviation gets too high, then your ability to say that you have a certain confidence in your result becomes worse and so, in cases where, if the results came back and they were all over the board and they did not fall, they required more samples, you might have to go out and take a few more samples. Yeah?

QUESTION: (Unheard) ...44 buildings and half of them do not qualify and are less, they take another half, another 22 and those meet. So, each state is going to come up with 44 or 88 with commercial and residential and there is no state that is going to say, we have not met the 90 percent compliance.

LINDA: Well, you are not exactly allowed to take the results and then only redo the ones that failed and so, that is actually another topic that is coming up and thankfully, I am not ready to address that one yet, but we do think that if you take the... If for example, in my example with New York, if New York City did its sample and raised it and it is not really 44 buildings, it is 88 because 44 residential and 44 are commercial. If New York City did their 88 samples and passed and the rest of New York failed, we probably would call New York City, we probably could carry that over. You know, how all that works out, we have not really decided, but you certainly cannot just chose the ones that fail and redo them. That would not work. Yes?

QUESTION: Regarding commercial, have you taken building square footage or building size into account?

LINDA: Yes and that is coming up.

QUESTION: Thank you.

LINDA: Uhuh. So, one nice thing about the data, we actually hope that we can collect in a national database some of the results, including we are trying to collect values, not just pass fail on code items. You know, what is the insulation R value in the walls. If this information is put in a database, we hope to provide tools that can give you alternative measurements. So, for example, method one, which I mentioned, we could go back and compute what that state would have under method one, even though that is not the method we are proposing, might make an interesting comparison. Yes...

QUESTION: I have a question about drawing a sample. Do I need... If we... I am assuming that you are planning states using or the jurisdictions using their database of permits issued in whatever time frame we are looking at. What if there is no permitting process? In other words, what if there was literally no database of construction starts?

LINDA: Right. I am going to get to that too, just briefly. That is an issue that we recognize. We have read it in other studies. I am getting a little low on time, so if you would hold your questions, I am going to try to get through the important slides so I can get these other speakers up. So, I wanted to go a little bit into the checklist we are developing, because that is the other important piece of this. The code requirements on the checklist, one of the big questions was should we include all code requirements, or should we just include the high impact requirements. Our recommendation as a program was that we should allow checklists that only have the high impact requirements and I will define that in a minute. However, there was a lot of controversy over that. So, since we are developing these checklists, we are also going to include checklists that have all code requirements and I will get to that in a minute too. They need to support the various building strata, they need to support the phases of construction, they need to support the various compliance approaches that are available and they need to capture the criteria, the values that pertain to the criteria out there and the comments that the evaluators have. So, one thing that I wanted to let you know is that the program does intend to help the states ingest this information electronically because a lot of this probably will be done on paper, although we hope to provide these checklists on Excel spreadsheets as well. So, as for all requirements versus the high impact, we took a look at the ASHRAE documentation for prescriptive compliance. It was 13 pages. The IECC plan review form, 12 pages. This is a lot of work to do for a single building.

They are very nicely done compliance forms, do not get me wrong.  It is just that that is asking an awful lot of the states.  These are some examples of checklists.  So, what we decided to do was to divide the requirements into three tiers.  Tier one is what we are calling high impact, but it is more than just the ones that have the most impact on energy use.  It also includes noncompliance problems and includes items that were newly introduced in the target codes.  We are also saying that if, you know, the tier one requirements must be on the checklist.  Those have to be complied against.  Tier two items, which are a little less impactful than tier one and tier three, even less so.  The states can choose from those, if they want to add those to their checklist.  Maybe there is something they know in their state that is a problem and then, they can also chose to make those checklists full checklists.  They can have all of tier one, two and three if they want.  The pilot studies we hope to do, we hope we get a mixed use of some of the checklists with just tier one and some of the full checklists and that we can come back to you and tell you how long it takes and evaluator to complete these.  So, the weighting that I mentioned, we plan to weight the tier one items by three, the tier two items by two and the tier three items by one.  The calculation is based on the number of items passed divided by the number of items inspection and these are weighted.  So, if you have two items from tier one, those are a total of six and if you failed one of those items, you get three out of six, you would be at 50 percent.  Now, obviously, there are lot bigger checklists than that.  We do plan to average the metric by building space.  The commercial building sample set will attempt to chose.  We are going to try to find the medium commercial office size through our DODGE data and chose and equal number of buildings that are larger and smaller than that average so that we are not all focused on small buildings or large.  By the way, it was unclear to us on our team whether adding more items would be advantageous or not.  The extra items that you might add to a checklist have less impact than the tier one items and you are also dividing by those extra items.  So, it is really unclear that this provides any kind of advantage or disadvantage and that is why we felt you could actually compare the results, even those the checklist may not be the same size.  Alright, well, I better turn this over to... Let me look really quick.  Just one minute.  The hook?  Okay.  Here is a picture of a checklist that we plan to put out.  It is still very draft, but you will see, it is in inspection stages.  The only other thing I wanted to mention was that we are going to allow multiple samples or multiple buildings to be used for a single sample.  So, you will see repeated here, the condition floor area at each stage, this is a plan check.  If they needed to go to a different building for foundation, it needed to be a comparable building, commercial same size, approximately same size, but that they could do that.  And this was to allow, for example, on residential, going to a tract housing development where maybe there is a lot of buildings out there at different stages of the development, instead of having to go back to that building each time to check the foundation and then the insulation and then the lighting, you might be able to gather that information from different buildings.  So, with that, I better turn it over to... Okay.

QUESTION: (Unheard) ...master code official on your team, your... team?

LINDA:  We have sort of.  Sort of.  We have people that have worked with IECC and with HIPPO and we also, that, you know, we admitted... You know, we are more than willing to admit that we do not have all the experience that the building officials and the builders in the industry have and that is why we have sent it out twice now for feedback.  It did go to the code bodies for feedback and we did get some back from them.  So, but yes, we do have two members of the team that have. One of them has worked for IECC. Eric, who I introduced, has been helping with feedback on these items. So, we do have some input.