

Duquesne Light Act 129 Commercial/Governmental Subgroup Meeting April 21, 2009

Good afternoon everyone if you'll please take your seats. My name is Michele Sandoe and I'm the director of customer care for Duquesne Light Company, and I'd like to welcome you to our Act 129 collaborative exchange for the commercial and governmental energy efficiency subgroup.

I'm glad to see everybody here thank you for coming. I really do appreciate your time, especially the folks that were here for this morning's meeting as well. It is critical for us to have your input during these subgroup meetings because we are developing programs from the foundation up. We need to get everybody's opinion and work together to make this a success. So with that introduction, I would like to introduce Cindy Menhorn.

We'll begin with roll call in the room.

All right. Good afternoon I'm Cindy Menhorn from MCR Performance Solutions I'm the project manager on the Act 129 requirement filing. I'm Larry Barrett with MCR Solutions part of the consulting team here. Good afternoon, I'm Colleen Mackin. I'm a residential service customer care supervisor and I'm part of the Act 129 team here at Duquesne Light. Wally Jenkins with Green Bridge Energy. Tim Mahaney with Carnegie Museums. Tony Young, Carnegie Museums. I'm Barry Kukovich; I'm the manger of customer relations for Duquesne Light. Matt Smuts, sustainability coordinator for the Urban Redevelopment Authority of Pittsburgh. Lindsay Baxter, sustainability coordinator for the City of Pittsburgh. Michael Jones, representing TransTech Technologies, solar energy. Ed Johnstonbaugh, Renewable Energy Development at Penn State University. Pete Jubic, representing Masonic Village in Sewickley. Richard Taylor, Imbue Technology Solutions, energy efficient lighting technology products and services. Steve Davis, MG Tech. Dan Ireland with Pennsylvania American Water Company. Jim Conner with CES Incorporated energy consultants. Jonathan Cox with Conservation Consultants here in Pittsburgh. Dave Defide from Conservation Consultants. Chris Smith with Energy Technologies Group. Jim Morinville from Energy Independent Solutions. John Wilhelm, CJL Engineering, consulting mechanical, electrical engineers. Michael Spacciapoli, KDKA. Elaine Nucci, KDKA. Vic Pasquarelli, KDKA. P.J. Kumanchik, KDKA. Amy Mauk, KDKA. Lynda Pekarsy, part of the team from Duquesne Light. Gene Ameduri with ENERLOGICS. Steve Moritz with the Plan Consulting Group. John Choma, Energy Connect.

Well good afternoon everybody. Thank you so much for taking the time to talk with us about this very, very important issue. I don't know how many of you were at the original stakeholders meeting when we formulated the subgroups, but some of what I'm about to talk about is a little repeat of the Act 129 requirements. In order to get us all on the same page, I thought we would take a few minutes and go over that. We're going to break this session out into what we believe will be informational related to your specific subsector group later on, but we're going to talk in general terms about the Act 129 requirements

and some of the forecast results, then go into what makes the most sense as far as breakout sessions.

All right, so where are we and what are the goals? The Pennsylvania Act 129 requirements require all utilities that have 100,000 customers or more to reduce energy consumption by 1% and 3% respectively in calendar years-or excuse me year ending May 31, 2011, and May 31, 2013. And that equates to about 141 million kilowatt hours by 2011 and 423 million kilowatt hours by 2013. Now that's on the energy side. There's other requirements as well on the demand side and that is based on a 4.5% reduction by May 31, 2013. For Duquesne Light's territory that equates to 113 megawatts that have to be saved by the summer of 2012. Now the achievement of these goals will be measured against a base year and that base year for energy is June 2009-May 2010 and on the demand side it's measured against June 2007-Sept. 2007 average of the highest hundred hours of peak demand. Now that has already been approved by the Pennsylvania PUC so we know our baseline so we know our starting point in terms of where we have to make that measurement from. Another requirement comes around the government municipal and educational and non-profit accounts. Ten percent of the savings must come from those particular entities.

So where do the funds for these programs come from? Well again the PUC has set the annual spending levels for the programs at 2% of the EDC's 2006 retail revenue. For Duquesne that equates to a little under \$20 million a year. Who pays for these programs? Who pays for these programs are the customers and the customers pay based upon the programs that are designed. In other words if within your certain class you will not be expected to pay for a residential program, you will only be expected to pay across the commercial class for commercial programs. Likewise an industrial program won't be paid by residential, a residential program won't be paid by industrial. So the benefit to the customer class will be received and paid for out of that customer class, so there's no cross subsidization that way. Duquesne also has a team that is looking at the stimulus funding after the act was passed in Pennsylvania we'll all know that Governor Obama came out with the stimulus package and there's some moneys associated with energy efficiency and demand response and smart grid and smart metering within the stimulus package so we're trying to look into that. There's a specialized team at Duquesne that's looking into that so we can leverage some of that funding if it's available.

Which programs qualify for inclusion in Duquesne's plan? Another requirement is that any program that we file for cost recovery of must pass what's called a total resource cost test. And that test includes all expenditures, both what the customer contributes in some of the programs that we're going to talk about, and what Duquesne Light contributes. Then ultimately the plan approved will be trying to optimize the programs to the customer segment so that we can achieve the greatest energy and peak demand savings. A note about some of the things that we're going to talk about today, the

program and the program designs are at a very, very high level and what we wanted to do is we wanted to present you with some program plans but nothing specific because we want this, like Michelle said, to be very collaborative. It's very important to us that we get your input and fully that all of your issues in terms of whether it's the way we roll it out, the way the items get paid for but anything you see today is just to facilitate getting the discussion moving.

Now our team looked and worked very hard to come up with what's called a potential study. In other words we had to look at the customer segments within Duquesne's territory to see if this was even achievable, to see if this \$20 million bucket that we had to spend could even get to the 1% savings it will require and beyond that the 4.5 % on the demand side. As you can see from this slide if you look off to the left in the first or excuse me off to the very right you'll see a column called TRC, that's the Total Resource Cost test so collectively all these programs that we've done a very, very high level design on, it looks like we're going to be able to achieve the 1% as you can see by the bottom with programs that pass the TRC test. So that was kind of the first cut, the first blush at is this even feasible for us to do.

And this is the time that I'm going to turn it over to my colleague Tom Crooks to talk about this particular sector.

Good afternoon, thank you Cindy. So we're talking about the commercial sector, a broad segment, customer class commercial. And if we look at the commercial sector to by energy consumption and say what are the major contributors of the 10 classic building types and things commercial, we can see colleges, food stores, health care, lodging, large offices, a big miscellaneous bucket, refrigerated warehouses, retail stores, restaurants, schools, small offices and regular warehouses. You can see how the energy consumption breaks down across the commercial sector. If we take a look at the major contributors; office buildings large and small contribute nearly 50%, nearly 50% of the energy consumption in the commercial sector. Healthcare is another large consumer of energy at 17%. If we group together retail stores, grocery and restaurants we come up with another 18.5%. Then education; colleges and schools rounds out at about 10%. So if we take those broad sectors; office buildings, healthcare, retail stores, education we come up with 92% of the energy consumption in the area under the commercial sector.

This really sets up you know what kind of programs we'd want to launch to provide the most amount of service to this market segment. In looking at what programs will provide service to those sectors, the first think we're going to do is follow on with what's worked in a lot of other territories and the last few decades is to put in place a commercial umbrella program which provides a level of service to all customers regardless of their customer segment. This puts in place the incentive levels, the methodologies, the tracking systems, all the requirements to facilitate operation of the sub programs as well. And then spin off sub programs that address the individual barriers to entry, those things

that generally stop the major contributing segments from participants from entering programs. What is it that stops them from being willing to participate? Is it the time and effort to fill out the forms, is it the lack of expertise, is the lack of capital, what is it that particularly stops you know the major segments? Could be split incentives that people that are renting the office space don't pay the bill, but they don't own the building and they don't want to spend money on the infrastructure so there's different barriers that stop different segments from being willing to participate in programs which over time have been pretty well documented. So what we'll be looking for is specific programs that address the needs of these particular large segments and ensure that we get participation in the programs and achieve the mandated reductions. Office buildings will be a major segment as we identified; healthcare has specific needs, retail stores. We'll be looking for specialized contractors who would be interested in taking contracts to implement these programs that have expertise in this area and have a demonstrated performance track record of working with the particular sub segment. We've found in the past that folks that know hospitals do very well in other areas and can bring to the front through trade associations and track record of successes, can be received and are received well by other hospitals. The same way with education whether it's colleges and universities or even K-12 schools. So we'll be looking for specialized contractors that are interested in bidding on and implementing these programs. So part of what we're doing today is looking for feedback from you; a contractor pool, a potential contractor pool and also from the end use customers, what is it about these programs that are attractive, or not attractive or what would make you want to go after these contracts or not, and try to get some input from you about our basic program structures.

We want to break up into sessions, try to identify kind of who's here. We've done a roll call but try to identify which major segments are represented here and then close with you in a more intimate setting and talk to you about what it is that you like about the programs, or what you're looking for. The basic construct of the programs will be to provide energy audits at no cost. (I moved quite a bit ahead of where you're at but I wanted to give a kind of a brief overview of the program construct before we broke into sub groups). After an energy audit, have a formal recommendation and investment grade audit report that shows where improvements can be made, and then a level of incentives offered that offset the initial cost associated with implementing those improvements. Again we're looking for specific market segment focus; folks with experience in these particular market segments that can provide assistance. After projects are recognized and reported and a customer makes a selection and says yeah I think it make sense to move forward with these particular projects then the contractor would help that customer implement the projects down to selecting a contractor if they need that assistance, to providing oversight during construction, to verifying the project's implementation, taking a look at the recommendations against what was actually installed, recalculating the savings and then providing the leg work of doing the paper work and getting the incentives flowing from the utility back to the customer. So that's the kind of the construct is we have a walk through, an agreement to enter the program,

an audit, an investment grade report, commitment on the part of the customer to make the installment, installation, the actual installation project, verification and incentive payment. So as we break into sub groups and talk about this, you want to be thinking about well how is that going to suit my needs, how would I use this, is this going to work for me, or what would I like to see?

Up on this screen you can see some percentages of costs offset. Now we forecast potential for energy efficiency in Duquesne's territory by assuming that we could pay around 33% of the cost of lighting equipment, that there'd be about around a 2, 1 and a half, 2, maybe 2 and a half year payback for the customer to install the measures after that point and this may be a motivator, it may not be enough of a motivator. We have payback probability acceptance curves that we've used to forecast what behaviorally what customers usually do given these kind of choices but we'll kind of be looking for input along those areas too if you have any of that. You can see that the percentages for incentives varied by lighting, heating, ventilation and air conditioning, refrigeration and office equipment. So as we get together in sub groups and start talking about well here's the construct of the program, here are the kind of services that would be provided, here's a level of incentives what we'll want to be hearing from you is yeah that's great we'd do that, or geez I wouldn't do that or just what it is you'd like to see. Then from the contractors side you know we're going to be looking for some levels of penetration that we have to achieve and some costs that we think we can do that with, we'll be looking for feedback from you on that and your express desire to come after these contracts and implement them, bid on them and implement them.

So with that I wanted to see if we, we've got from the office building segment is there, can you show of hands of anybody that would represent or be interested in that sub group? Quite a few there so.

Are you grouping large and small together within that grouping?

Yeah I am, large and small offices. We can talk about that in the sub group but it's definitely 2 sectors and it has 2 different drivers but for the purposes today I wanted to try to do that. If we need to break it out further ways we can. So we got a pretty good showing for office buildings. And retail stores, are there any representatives from retail stores, grocery or restaurants? So we're probably under represented in retail. How about education? I think we had some universities. Okay definitely, so strong showing in universities. So let's if we can, we'd like to do is sit down and look at these programs and show you what our construct, what we want to pay, what we're looking to do and then get your feedback where we can record it. So we have office buildings, we have healthcare, we're lacking retail stores. Are there any healthcare, people here from healthcare? Okay, good, we're not going to have retail, we're going to have healthcare. Actually we were hoping to have a separate stand alone with healthcare because it's

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going to take some time but that'll be good. So let's have healthcare and if we can kind of organize over on one side of the room.

If I may.

You may.

Is there anybody here that feels as though they don't fit in any of those groups?

Did you say the local government?

Okay I was thinking about the city.

We have the city, we also have water agencies.

_____.

The local government agencies. And then my second question while he's thinking about that and I can tell he's thinking can you see the smoke coming from his ears? Did anybody get on the phone?

_____.

Hello could we have a roll call of anybody on the phone please?

Yeah healthcare industry.

Okay. Could you identify yourself please?

Sure, my name is Pat Sampson with the Masonic Villages of Pennsylvania.

Thank you.

Steve Novicki, St. Clair Hospital.

Anyone else?

This is Sandy Phu, at the VA Hospital.

Anyone else on the phone line? Okay thank you.

All right so we've got office buildings, we've got healthcare, we've got education and we've got local government. All right can we break up now?

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Okay. Healthcare can stay in this room and stay on the phone please. So now anybody except healthcare will be relocated to another room. (NOTE: Separate sessions also were held for office buildings/government and education.)

Hello folks on the telephone. This is Larry Barrett speaking. I am a contractor with MCR Performance Solutions and we are trying to carry on two kinds of meetings here in one room. So if you cannot hear me right now let me know, but I assume you can. We've got 2 people here in the health group area that will be participating in our brainstorming session I guess that's one way I'd characterize it is brainstorming. The format is going to be pretty open I'm going to try to provide some guidance because some of the people are on the phone and some aren't.

All right so we've got VA Hospitals on the phone, we've got Masonic Villages on the phone, we've got engineering in the room, we've got Penn State University in the room, we've got Masonic Villages in the room. I guess I'll suggest kind of an order of business here. One is yeah and I've asked them if they can't hear me to speak up. Let me just review the general vision we have of the programs. Repeat what Tom already said, but also then phase 2 I want to get general comments about what the general vision and then maybe we'll drill down into specific aspects and get some specific comments on program designs, contractor relationships, incentives, how you participate in a program, how you determine eligibility, who gets paid, any incentives whether they go to contractors, whether they go to customers, some of those kinds of issues we'll get your opinion on. And I'd be curious to know from particularly customers what they're payback criteria is, what their investment criteria is, what are their hurdles to making investment decisions in energy efficiency programs. The general concept with the way these commercial programs work around the country is pretty straight forward. The customer has to have a certain amount of awareness, a certain amount of information and we want to get them interested in the program so a contractor; assuming we run this through contractors would approach the customer and offer them to do a quick walk around audit. It might take a few hours, hopefully not much more to walk around their _____ particularly if it's a major building but in the case of hospitals we're also dealing with a campus so maybe a walk through takes a whole day. Then the customer may be asked to sign an agreement that says yeah we really do want to participate in this Duquesne program with you, sign agreement, it really doesn't obligate you per se, except to go forward to the next step which is then the contractor will come back and do a detail audit or sometimes we call them an investment grade audit and these are the kinds of audits that really dig into replacing lights, replacing motors, new chiller systems, whatever kind of opportunities might be in HVAC, whatever, heating, cooling and those investment grade audits are quite granular because they'll go through and they'll count the number of lights, they'll count the number of motors that they're going to replace, the energy savings associated with those, what the cost is going to be, what the payback is going to be and also what the Duquesne contribution toward those costs are going to be. And as part of that investment grade audit, they'll calculate what the customer has to contribute,

what the payback is with the Duquesne rebate, without the Duquesne rebate that kind of stuff. Then the customer is asked to sign an installation agreement typically which then authorizes the contractor to proceed with those measures that are listed in the investment grade audit. Typically the investment grade audit will, who knows, have a whole list of measures and the customer will say well I just want to do this one and then skip that, and skip that, do this one. For the first round they could say but maybe round two, a year or two later I'll have enough funds to help do the others, so there's a little bit of a cherry picking going on, but that's okay. But once the customer signs that installation agreement then the contractor proceeds to coordinate the installation, hire any lighting contractors, HVAC contractors, plumbing and heating contractors, whatever it is to come and do the work, those folks get paid. Then that contractor will also probably be part of an inspection crew or a verification crew that goes in and says yeah you were supposed to change out 125 fixtures and I counted 124, you missed one or something like that, so there's that kind of a verification. So the energy savings gets reduced accordingly and we've figured the energy savings on 125 lighting change outs we ended up 124 so we're going to reduce that because these numbers all have to get reported to the PUC and to Duquesne to verify that they're meeting their targets so there's that kind of a verification that goes on and sometimes the incentive payment is held out too. So the contractor may be asked to do the work and they're promised progress payments as the work goes forward up to maybe 80%, 75% whatever it works out to be. Then after the lighting is in place, the HVAC is in place, and some additional monitoring goes on to confirm that the energy savings is there, then the contractor gets the other 20%, or the 25% or 10% whatever it works out to be.

So the incentive piece, so there's 2 main costs to the contractor, potentially the customer one is that when they agree to the program then you do the walk through audit. That walk through audit can take days in the case of a campus, it can be pretty labor intensive and it could cost who knows \$10,000, \$50,000. Under some program arrangements if the customer agrees to proceed that's absorbed. Under some program agreements say the customer says I'm not going to proceed there's an agreement; 50/50, 80/20 something like that, so those are some things we might talk about as to how that investment grade audit cost gets recovered.

Then of course when you get to the installation portion there's issues there too about what the utility contributes versus what the customer is going to contribute. So that's the general program design that we're thinking about and I'll just open it up to see if there's any general comments about any energy efficiency programs you've all been associated with that you think might be good for us to consider, some of their features, some of their lessons learned, that you've been particularly proud of. So maybe what I ought to try to do here is let the people on the speaker phone talk first and see if they have any general comments about this program outline that I've just gone over and then I'll talk to the group we have here in the room to see if they have any general comments. So are you there on the speakerphone, VA Hospital for instance?

What if we have energy audits, we just have an energy audit for all the VA Hospitals. If we have ____ project for that, would that counting on the program?

What I thought I heard you saying was that VA Hospital has already done an energy audit?

Yes, we just had an energy audit and then we're still waiting for a report you know and after we have our report probably we have some more projects from that.

So you've already in effect developed a project list or potential project list of investment opportunities?

Right.

So one of the, so how would you like to see this, what would you like to see then happen?

Probably doing a couple years.

I guess I could see 2 scenarios here. One is that we would dispense with the walk through audit, we would dispense from the investment grade audit and then just pick up on the audit that's already been done for VA and that you would proceed with your own contractors or contractors associated with Duquesne to actually do the work and then proceed through the application that way. That's one option that strikes me which would be to pick up where you are.

Option two would be well we still want to go ahead with the investment grade audit to see if anything else has been missed, then ask you to work with you to develop an investment plan. Do you have any comments on whether option A or option B is preferable?

I'd like to do option A better.

Yeah.

From what I understand from what we are saying here, we would look at the audit that has been completed to determine if it is a comprehensive audit and assuming that it has been, we would then look to work with say the VA Hospital to address the issues that have been determined from the audit or resulting from the audit. Is that correct?

Can you repeat?

Oh I'm sorry. I think, just to be clear, what I think we're saying here is if a hospital or a healthcare facility already has an audit completed, we would review the audit to insure that it has been done in a diligent manner or sufficient manner for us to determine appropriate energy efficient and demand response opportunities. And so, given that the audit is sufficient, we would then work with the customer, in this case the health care individual, to partner with them to implement some of the outcomes of that audit.

That's really good, yes, that's the one we're looking for.

Okay, thank you.

Thank you.

Any other comments for those on the telephone, general comments?

Yeah this is Pat Sampson with the Masonic Village. I just wanted to kind of re-echo what the VA said because we're in the same boat that they are which is that we've already started a number of audits at our facility in the Duquesne area and having that option or that opportunity to not let that work go to waste would be something that we would like to see and maybe even taking it a little bit, a little step farther than that in terms of whether or not something has to be "investment grade." I think there's certain standard technologies out there that are going to be part of your program like replacing incandescent with CFLs, like replacing T-12 with T-8, that I mean they're kind of you know to borrow a well used phrase, no brainers and have a you know a payback that's already well calculated and associated with them so I think building some flexibility into the program to be able to look at those no brainers and the audits that have already been done would be beneficial.

Okay. Let me ask in both cases, the Masonic and the VA, what, maybe I'll ask my contractor friend here as well, it strikes me one of the limitations of proceeding directly is that you might've already implemented some but not all of them. I mean you're using your lighting example maybe you decided to do one part of your campus but not the other, so how do we know what we're supposed to take credit for Duquesne Light unless we go back and do another investment grade audit to confirm what's already been done?

You know I think that if they already have an audit done and in this sector; healthcare, they're a more sophisticated client than you know not to pick on the educational people but a K-12 school probably wouldn't have had this done. But a Masonic Village, certainly UPMC, you know St. Clair Hospital, those people know what they're doing. So I think if they have an audit already where the initial audit might be a hundred hour exercise, it might be 5 hours to confirm or review. I think, still think Duquesne Light needs to take a look at it and say you know this has

been done, this hasn't been done, this doesn't meet the program criteria, this does, but it drastically reduces it to maybe 10% of what it would've been.

Okay. Michelle has a comment here.

I didn't know if you were going to comment on it, but to your comment concerning the no brainers, we absolutely agree that if you look at the presentation and hold that thought for a second we talked about reviewing on an umbrella program a whole bunch of "no brainers" that would be appropriate for the healthcare industry as well as almost all of the commercial industrial area, and that includes the CFL change outs. I think, I suggest that you review what we're looking at as an umbrella program but then to discuss here anything specific to the healthcare industry that we should focus on in the program that you may not see that well maybe it's a no brainer for you, but it's not a no brainer for the office section. Then I know the folks on the phone who do not have a copy of the presentation, we will post that on www.duquesnelight.com as soon as we possibly can, it will be on the bottom right hand side, click on Act. 129 and if you need it sooner please email me at act129feedback@duqlight.com.

All right. Any general comments here from the group that's in this room initially in particular?

We're going to start with Mr. Electrical Contractor here.

Well yeah we are electrical engineers and mechanical so we would look at mechanical refrigeration was up there, HVAC, and electrical and we do a lot of this but you know again this sector is a little unique in that it's a lot more detailed in a healthcare facility than it is in a K-12 school. So I guess some of the questions I had is the hospitals often have relationships with contractors. You mentioned that the program manager would be responsible for getting contractors and sort of overseeing the whole project, the installation. Say we're going to replace a chiller, now that's a pretty big job and pretty detailed stuff so I think the healthcare people are going to say well we already have certain contractors that we like, we already have certain engineers that we like, you know can we do these programs on our own and submit the paperwork back I guess is the question. Now that will happen across all of the sectors but particularly healthcare.

That's a good observation, yeah, you would like to be able to preserve that relationship I assume.

I think the hospitals would for sure. I mean they have people sometimes they say XYZ contractor does all of our electrical work, we like him, he knows the campus, we know he does good work, we know he's fair, we want him to do this as

opposed to a contractor sending out a general bid to anybody. There may be union issues involved with some of this so you've got to look at all that stuff.

That's true, all right.

I mean another question in general for the whole program healthcare and the other ones, is there are a lot of clients out there and we're talking about a lot of work and we had actually looked at Allegheny Power in Maryland was looking for a similar program. They wanted 1,000 energy audits a year. There aren't very many people around that can do 1,000 energy audits a year because, as you, said they may be \$50,000 would equate to 500 hours, 500 hours times 1,000 there isn't a firm sitting around with that many people looking for something to do. So I guess a question that I might have is we're talking about a lot of people here and not only the hospitals, the whole commercial sector. How do you get enough horsepower to do all these energy audits?

That's good.

Another question I had and maybe this is a recommendation you know the stimulus money, the state and Ed probably knows a hundred times more about this than I do-stimulus money, state tax credits, state rebates, there's state money available. Somebody maybe from Duquesne Light needs to be a coordinator to say, look the change out of the lights might cost \$100,000 but we can get a third of that from the state, we can get X amount of money in tax credits if we do that, and we can get stimulus money. Right now that whole arena is the Wild West. Nobody, I don't know if you do Ed, but nobody really knows where that money is coming from, who it's going to be channeled through, what groups are responsible for bringing that money.

But I think there's tremendous opportunity here and I don't know whether that money would be above and beyond your \$20 million but there's a great opportunity there if that money's above that to really pile a bunch more into this program. I think that'll benefit everybody.

And I think that's what, that is a great question that needs to be resolved because we've talked about _____ have to provide a link to all the different sources that are out there. But the question is does it make sense for us to do that or does it make more sense for us to help our customers coordinate all of that? How much, I guess the question is how much I'll say interference, but how much interaction do you want when the utility company is doing that? That's the real question.

I would imagine you can answer this right off the bat, are there people waiting in the wings at Duquesne Light to be able to be available to do that kind of work?

Not yet but the question is _____ develop a program designed in the program or not , _____.

That's what I think you need to decide is where those resources are going to come from because just like there aren't people to do 1,000 audits a year, there aren't people to handhold 1,000 successful audit recipients through the paperwork to get access to that kind of funding, that's a big challenge.

So maybe as part of the investment grade audit one idea would be to factor in the different sources of funding and not just Duquesne, but tax credits, stimulus funds and all the others and that could be a really useful service if that were centralized whether it be at the state level or at the utility level or some other level.

Well that's something that I think along the lines of what we were talking about earlier that that should be a statewide resource because it doesn't vary from utility company to utility company and it's also an ideal option for the conservation service provider role to be able to act as a consultant to point recipients or potential recipients in the direction of available funding in addition to linking up contractor resources, audit resources, and you know kind of the management of the whole function.

Those are some good comments, keep going over here my friend. Pick up the mike though.

I guess one of the other things that I was a little bit concerned about is in a big facility and whether it's again educational; University of Pittsburgh, or you know I know Masonic Village has I don't know 20 or 30 buildings up there on the hill, these are time intensive-to do it right-they're time intensive audits. Again the outcome of the audits is going to be in some instances pretty detailed stuff too. The lighting change outs are fairly straight forward but replacing a chiller or I saw that refrigeration was one of the main items up there, replacing a chiller gets into more than just taking out a 30 year old unit and putting another one back in. It may be that some of that equipment if the facility has reached its useful life and the facility was going to take it out anyway, or it may be time for an upgrade. They're going to say okay, because this are million dollar projects they're not you know-So it's going to get pretty tricky working with the different facilities saying okay now it's time to upgrade maybe we need a redundant chiller, or maybe we want to put the chillers in the OR onto the emergency power distribution system when they weren't before. Or maybe we want to use our generators for combined cycle sort of _____. I'm just worried that one or two of these projects keeps a fairly large sized company busy for quite a long time and again I'm just worried about how all this work is going to get done. How many engineers are out there?

There's never enough.

Well we've got Carnegie Mellon here, we've got all sorts of good resources.

The thing is and you know I'm sure I heard the names of sort of energy companies too and they'll be a big help but they're not necessarily PE's either. So they'll be able to maybe run the economic analysis and do some large thinking but I guess as engineers you know how German engineers especially that's how we are you know how's this really going to get done and we see that there's a lot of detail here that boy it's going to be a tough go I think.

Well that's a very good point.

Let me get back to your point about-I'm sorry. I think it goes back to your point about potentially partnering with the healthcare area with their engineers and with their contractors that they already use because you already have that relationship and perhaps we could tap that faster.

And certainly those people you know say for at Ohio Valley Hospital, we've been working at Ohio Valley Hospital since 1967 it would certainly be a lot easier for me to go there and see where the energy conservation opportunities are than somebody totally out of the blue. You know it's not to say that somebody can't, but it makes a certain amount of sense. But I don't know how many hospital and healthcare facilities are in your territory. It's got to be a couple hundred? If you add all the small ones up and all the big ones you know obviously somebody from UPMC if they're the big target here and you know probably in your whole territory, they need yeah UPMC should be involved and Allegheny General should be involved and maybe you should make a call to those people specifically and see if they could join in this discussion somewhere along the line because they're certainly major players.

I think in fact there's a meeting tomorrow with UPMC. Those are good comments, any other general comments that people want to throw onto the table?

Let me turn to something I guess specific or at least a little bit more specific, there's a table in here that we showed this table, that was labeled at the top high level description of sub programs. One way to look at that table is the column that says prescriptive incentives, lighting 32.6%. So what we're saying here is that we would design a program where if a lighting retrofit qualified we'd try to come up with an incentive level that covered 32.6% of the cost. And for HVAC we'd try to come up with an incentive structure that would cover 45k% of the cost. And for refrigeration 60.9% and others 50%. Tom mentioned during his presentation that was, these are partly developed with the

expectation of we won't pay 100% of the cost, somewhere between 0 and 100, what's the appropriate level? One rule of thumb is that we would assume that the customers would be willing to pay whatever the cost is they'd be willing to pay the equivalent of 2 years payback. So say if you had \$100,000 project and they'd be willing to pay up to \$40 and it could save \$20,000 a year, a 5 year payback normally for \$100,000 project, they'd pay \$40,000 and so the incentive would be \$60,000 or maybe it should be the opposite. So I guess one question I have for anybody on the phone as well as here is what has been your experience with customers in working with customers what is their payback threshold, what is their return on investment threshold? Is it 1 year, 2 years, 3 years, could you generalize?

I guess from our end it would be and again it's going to vary by customer certainly but 2, 3, 4-year payback typically. So between 2 and 4 typically. Now again if they get incentives though and again this is where it's going to get a little detailed, if they're going to replace that chiller anyway and you give them an incentive and it's a million dollar project and you give them \$600,00 they'll be lining up outside the door because they had to do it anyway. So in that regard they're going to be all over it.

One of the things that I think gets forgotten in this conversation is the importance of the fact that the rate class that receives the benefit is going to pay for the benefit. So when you talk about a payback period you need to factor in as well the surcharge or the cost of the rate class Y expense and then emphasize that if you are in that rate class and not a participant you are subsidizing the rest of the rate class to receive the benefit. That's an extra incentive to do the upgrade because you're basically going to be, you're going to be paying for your neighbor to do the same thing. I think that gets lost in the conversation especially when you talk about well just about any customer that this is an extra motivation to take a close look at what you can do and to push the barriers or boundaries on what your former payback wish list looked like because it kind of changes it. There's other things on the table too like Tier 2 credits or alternative energy credits as added incentives that can come into play if you're really being creative as well as structuring deals so that you can take advantage of the tax incentives. In this case we may be talking about non-profit organizations that can't really take advantage of tax credits but if the deal is structured in such a way that there's a for profit entity involved in the ownership they can monetize those tax credits and take advantage of it.

That's a good point.

Do you have a rule of thumb at your institution for paybacks?

No.

Not really.

The less, the better, of course. And I'm not really speaking on behalf of Penn State University I'm just speaking more on behalf of looking out or working with customers in the non-university world.

Okay. Anybody on the line have any comments about payback thresholds that make or break projects that currently subscribe to satisfy your CFO's and all that sort of thing?

Well for government payroll, I think they're looking for a payback period that have to be ____ out for SIR, have to be more than 1.5.

Internal rate of return of more than what percent?

1.2 or a 1.5.

All right. And that was IRR.

Wait then internal rate return of 1.2%

Uh, huh.

The client's we work with are looking for 2-year payback and some maybe 3-year paybacks. The 2-year payback being cash on cash simple payback being threshold under that ____ finance.

What was that, 2 or 3 years is that what I heard?

Two years in most cases, many customers are coming back saying 1 year in this climate, the ____ we shouldn't make a policy decision based upon just this climate. But it's 2 years and it's 3 years depending upon the industry. Commercial real estate might be a little more rich, retailers might be a little less, industrial might be a little bit more rich they might be willing to go 3 or 4 years.

That's good. So yeah some rich industries if we were-

The reality is segment-driven approaches are going to be more effective than just saying all rate payers all go into one program. You really need to look at the needs and the approaches of the different segments and say we need to approach them differently. This is the approach commercial different from residential, you need to break commercial down into industrial, maybe a HUGS market and then also

national retail chains separately. If you look at different segments you're going to have a better success rate in luring the right type of behaviors out of these clients.

We've got an internal comment here.

This is a question for Duquesne Light. The current proposal is that everybody in commercial would be grouped as one, right? And that there wouldn't be subsets within commercial or subsets within residential or-

I'm sorry I apologize. What we're looking at essentially is a commercial umbrella program, but then to have detailed programs broken down by office buildings, healthcare, education and then retails so that each subgroup of commercial we would try to tailor a program which is why we're trying to get in the healthcare industry specifics of what you're looking at from this industry that's why we're talking about the payback for this industry so we know for this segment what's going to work.

That's a very wise approach because many of the other utilities have established programs are moving toward segment-driven approaches in the commercial sector.

I guess the comment then that I have is that you have \$20 million for the whole program, say commercial is 50% of that, so there's \$10 million for commercial and then inside of commercial you've got a number of different say there's 5 and so each of those get \$2 million well that's 1 in the healthcare if I'm going to replace a chiller someplace that's 1 or 2 jobs. So now that doesn't include the money that the client puts in or any of the subsidy money.

Yeah you're question there would be how much money is it going to take based up on the energy savings to basically buy down that project to a 2 year or maybe in the healthcare industry, a 3-year payback.

Yeah exactly.

In other words if the cash on cash is a 4 year payback you might have to buy a years worth of financing to buy it down. That money will go a lot further. The other thing you could do with the commercial is have different segments that all pull from the same pool and as that money runs out it runs out. But then the market itself and the attractiveness of the programs will dictate which sectors are accessing the money most. You don't have to be limited by allocation per se.

I'm sorry just to make sure I understand, the suggestion is will we create programs tailored to the different segments but we keep the money consolidated into like a commercial pool.

Correct.

Just for argument just say it's \$10 million for the commercial segment. We'd have these subgroups and we just tap that money but we don't worry about \$1 million specific to education, or \$2 million specific to hospitals?

Yeah you're going to make it a little bit of a boarding house grab but the reality is you'll get a real clear indication of which programs are working and which ones aren't. Then you can always make special changes to the programs to get more participation. The goal here is to use the money well and apply it toward savings.

Exactly.

So if you pro-rate the payments versus savings in an effective way the marketplace will tell you who's most interested in partnering with you and going after savings. There might be that you need to create an education segment to go after leased office space, or you might have to create an education program throughout your healthcare to drive people into these programs. Or people were talking earlier about audits, you might have to create an audit program using technical competency to identify conservation alternatives don't exist within the organization. But you'll learn that, you'll learn that pretty quickly.

Yep, that's a good point. Anybody else on the phone want to chime in on the-

Are we supposed to announce ourselves or are we just okay-

Oh yeah we did that earlier, would you announce yourself.

I'm sorry I'm late to the call I apologize.

And you are?

I'm sorry, I'm Doug Bloom, CEO of Real Win Win.

I've heard of that outfit. You guys do lots of data collection and rebate processing.

Yeah we do a lot of rebate processing nationwide.

Yeah you know all about rebate structures.

We also do a fair number of audits. We're actually doing audits for other utilities.

Good thanks for being on the call.

It's great stuff I'm glad you guys are doing it.

One of the questions that maybe relates to incentive is the payment process. Some utilities run these programs where the incentive when it gets paid it goes to the customer. Sometimes they run the program where the incentive goes to the contractor assuming the contractor pays it through to the customer, some programs give the customer a choice to sign a release so that the payment does go to the contractor. Is there any preference that the people on the phone or in the room have about where does the money go from Duquesne when they pay an incentive? Who does it go to?

I'll speak in again, there's also some that pay them directly to the manufacturer. It really comes down to you've got to look at what you're trying to incentivize, who controls that behavior and pay that group. I think it works well no matter where it goes, it depends upon the individual bias, I mean some contractors will tell you they'd like to get paid but then they have a negotiation aspect with the client. The real key there is understanding who is really influencing behavior and making the choice and then incent that person to make the right behavior. We've seen in California for example, HVAC incentives are paid to the distributor because they believe they have influence over really recommending the higher efficiencies. I'm not necessarily that works the way California would like it to but that's the way they approach it. I mean if you're looking at paying out incentives for lighting retrofits, you probably want to pay the client because the key is that they need to really factor that into their ROY and you're not necessarily sure it's going to get fully exposed, you know the different alternatives of lighting densities that'll get them to the full ROY though I think there's some challenges there.

We've got a comment here.

I guess another comment that I have both in healthcare but especially in education you know I assume we're talking about the whole thing that'll help everybody out but you know in government and say the educational end say there's a lighting retrofit that's going to be \$100,000 job I think the state is going to mandate that that be publicly bid. So you've got a bidding process that can be pretty complex also. So you're not going to be able to just say you know get a number from 1 or 2 people, it's got to be public bid, it's got to be advertised in the case of a in Pennsylvania, in the case of a public school district if there are different components to the project; architectural say mechanical, there's going to be electrical because you've got to hook up a new chiller, those all have to be separate prime contracts. It's an extremely convoluted system and it's again adding some complexity to the whole process and complexity means time and time means money. I guess the other issue that I see here is that even with the

subsidies this money is going to go in a flash. It you know on the educational end I think in Allegheny county we have 137 municipalities and each of those municipalities has multiple schools so if we were using our \$10 million for commercial and \$2 million for each sector, \$2 million is almost a pilot project. You know how are we really going to reach out to 137 school districts, that's just Allegheny county, you've got many more past that so it's going to be gone before anybody knows about it.

Well is it \$20 million a year or \$20 mill?

A year.

Twenty million a year okay thank you.

That is a very good comment. If California went through some sad experiences in the 90's with some of these energy efficiency programs where they would the door would open on January 1st and it would be totally subscribed a week later and you'd have to wait another year to apply if you wanted to take advantage of the funds.

I could see that happening. I think another problem that he gentleman on the phone sort of eluded to was that how do you get the most bang for your buck. I mean you get the first guy through the door has got a program that costs \$100,000 that saves X. The next guy has one you know that cost \$200 but saves 4 X. You've got to analyze what's the best use of this money and then you've got to go cross sector too.

___ it's more than just getting 1% and 3% by savings yeah you want to do it the most efficient way possible.

Let me see if I can summarize what I thought I heard you saying. You're suggesting that Pennsylvania rules may require that any of these funds get spent under a competitive contract arrangement?

Certainly the installation, yeah. Maybe even the energy audit and the design in certain I think maybe in some instances there too.

(Inaudible)

It's likely that you could say okay I can spend \$20,000 on the audit and \$20,000 on the engineering but then I need to bid the installation, but there will be certain public entities I think more over there on the government sector that they're going to say any contract over \$5,000 or in fact just this week in Pittsburgh there was something in the paper about any-Peduto said any contract I think over \$5,000

needs to be publicly bid or Ravenstahl. So all of the sudden even well it depends on who's paying for the study, if it's Duquesne Light then you can make the rules. If the consumer is paying for the study or the consumer's paying for the engineering, they're going to be a number of issues with publicly bidding that process. Now maybe if you get a list of 10 people that can supply the audits and 10 people that can supply the engineering that would be enough, or maybe it might have to be just a generally advertised process, I don't know.

Well I'm thinking again of some utility programs that I'm aware of where there isn't that requirement for competitive bidding. The presumption is the utilities incentive is going to be determined in terms of like here, lighting .11 cents per kilowatt hour, so a proposal could come in for instance from a customer and say we're going to save 2 billion kilowatt hours, Duquesne would calculate the incentive and say .11 cents times 2 billion that's what your rebate is. We Duquesne do not care whether you use ABC electrical contractor or XYZ electrical contractor, that's up to you to get the best deal because we're only going to pay you .11 cents times the million. So I would feel comfortable making that argument if I were Duquesne. Now is that going to fly in Pennsylvania? I don't know. It flies in lots of other jurisdictions. Now I understand if you're a government agency particularly municipalities, state, universities, everything has got to be competitively bid whether it's \$5,000 or \$5 million.

But your point is well taken. The incentive itself is just about lowering the first cost of the energy improvement. The client _____ and they could have 4 bids on the work and have 1, each work might have a different lighting power density on the outcome. That's going to influence the incentive differently as well.

Well that could be too. You say you've done some work with hospitals where you've already got a contractual relationship and you'd like to preserve that. Is it going to be okay for that customer to submit a proposal put together by that electrical contractor or that electrical engineering, or that engineering firm. Does that mean that Duquesne's got to keep a list of preferred contractors, preferred engineering firms or does that mean Duquesne can be indifferent as long as the customer is submitting that proposal? Duquesne doesn't really need to care whether it's done by one engineering firm or another engineering firm. Nor does it mean that Duquesne's going to have one engineering firm that does everything for the hospital sector throughout its service territory.

To that end there's a major hospital in Texas that is undergoing a major renovation. They're participating in the Texas commercial and industrial standard offer program. They bring their own contractors to the table. The contractors have to be certified in the state of Texas, follow all standard permitting, etc., etc., and all standard design practices in the state of Texas and that's required by contract under the offer program. The medical institution did go out to bid with multiple

contractors to determine which contractor they're using. But the utility can require a certain level of competency without necessarily having to designate specific people. If the utility was say undergoing a retro commissioning program and was paying for the retro commissioning per se, for that _____ work then you probably would want certified contractors. But if you're paying just for the energy reduction you just need, I mean you probably just need to certify that the work's done according to code and that the specs prove out that the actual energy savings will be there. Just a suggestion.

Yeah that's common in other states as well where as long as the contractor is certified or the engineering firm is certified at the state level, then that's acceptable. I don't know what the rules are in Pennsylvania. We've got a comment here.

Points to keep in mind in the application of the Pennsylvania model is the insertion of the entity known as the conservation service provider between the utility and the customer. And the function that the conservation service provider is to keep that relationship at a minimum at arms length and the conservation service provider is under contract to carry out specific duties or responsibilities for the utility in order to keep it at that or maintain that separation between the utility and the end use customer. At least that's my interpretation of it. It's easy for us just to think that these are utility programs, but in fact the conservation service provider is the entity that fits in between the utility and the end use customer interfaced on that side with whoever the contractor is that actually performs the work. I think the language has been clarified in the state that says that conservation service providers in fact aren't implementers or installers or contractors but consultants, administrators and advisors as it is to the utility on behalf of the end use customer.

Any other comments from out in the cyber space or whatever we call it- telecommunication space out there on any of this? So we've talked, well here's another topic. The buzz words in industry are prescriptive versus performance based programs. Prescriptive means that Duquesne will pay an incentive based upon dollars per measure. So it could be in the case of lighting we'll pay \$40 per fixture electrofit. Count up the number of fixtures you've replaced times \$40 that's what the incentive is, that's a prescriptive program. And you could do that with quite a few things, you know roof top units of a minimum SEER or EER unit, you can have prescriptive measures. Although even there you could granulize that in the sense that you could make it based upon per ton, so it's \$50 per ton, so that's a prescriptive program.

A performance program and a prescriptive program goes along and you had a list of measures and you take this times that dollars and you add them up. Performance looks more at the whole building, multiple measure interactions, so you could have lighting

affecting HVAC and ventilation affecting HVAC. So should Duquesne follow a prescriptive path on these programs or a performance path or what do you think?

All right.

For this sector, I think that prescriptive is going to be tough because healthcare facilities are extremely custom made. There aren't very many hospitals that have packaged air handling units or heat pumps spread around. They're pretty detailed, complex systems. So certainly prescriptive may be in housing and maybe even in educational per fan coil unit might work, healthcare it's going to be tougher. That being said, prescriptive is going to be a lot easier to manage. The analysis just as you've said, the analysis of when you change out the lights how much HVAC does it save, or you know if you did a window, if you increased the efficiency of an envelope in one of these buildings, you could get huge savings but it's savings across the HVAC, savings across the electrical. How do you really model that? Now there are modeling programs that do it but they're pretty complex; DOE2 and Traintrace can do it but again it's increasing the thought process and the up front work that has to happen with it and it can be pretty complex. I mean the other thing that you could do, is you could have a hospital-and again one of the questions I had was does this count only for existing facilities or if somebody is building a hospital and they say you know we analyzed this energy savings system and it had a 4 year payback if we had to pay for all of it and we don't have the money for it. But if you come in with a 50% subsidy, it's 2-year payback simply, now we're going to do it. Does this program count towards that or not? We'd sort of need to know that. But then how do you, again how do you monitor that? If they're going to get money-maybe they would've done it anyway, or do you end up paying for somebody anyway. Then I guess the other question I had is did the baseline change from our initial meeting? I thought our initial meeting said that the baseline was going to be a calculated number set sort of assuming certain expansion anyway. If it gets busy again and all of the sudden people start building new hospitals and building new schools and building new office buildings, your baseline demand and consumption numbers are going to go way up. Or what if the economy gets worse and all the sudden people start moving out then you're going to meet your baseline without doing anything.

We've got another comment here.

I'm not going to be able to quote the specifics here but the model is adjusted to compensate for that. So meaning even for example if somebody goes out of business or there's union work stoppages or the converse, if you have an influx of Walmart construction the baseline has to be adjusted to reflect what the economy did, what unusual circumstances. Take for example if a major manufacturing firm would go out of business, that could get you to your threshold without any work at

all and that, the model is set up to compensate for those things. And one of the measurement devices I think that's critical to the analysis that we're talking about here is basic hard numbers from meter data. You know you were commenting on new construction for example in a simple watts per square foot calculation based on an annualized, weather normalized actual record of meter data helps to tell the tale about you know, it's kind of the end story of this audit approach that we're talking about. If you go in and do a lighting retrofit you should be able to directly reflect those changes in a change in the meter data over an on annualized basis.

Michelle has a comment.

Just like we talked about last time, a lot of this is going to be on a deemed savings approach. Just using a basic example like a residential home you have someone who replaces all of their lighting with CFLs and then I don't know buys a-puts in a heated pool. Obviously their energy uses would be skewed but we can say the customer installed 25 CFLs and the deemed savings from those installations are X kilowatt hours, so that's really going to be our focus as well.

Do you have-

Another topic that-

Can I comment on the last topic please?

Oh, yes go ahead.

Thank you. You need prescriptive, you can use prescriptive wherever you believe the savings are going to be expected. In other words if you're taking out lighting ballast combinations, lamp and ballast combinations and putting new ones in you have a pretty good understanding as to what the impact is going to be. As the gentleman said, in a complex system where you have chillers and air handling systems that are not straight forward, you're going to have to use some sort of modeled expectation. I mean if you're putting roof top units on and you know they're X amount of tonnage, they're of a higher efficiency than the other standard model then you can make an estimation. I think the challenge you have is you're always going to want to pay a certain amount of money for the energy savings, whatever that might be, if it's 5 cents per KWH or \$300 per peak demand reduction there's models out there and there's other utilities which have already gone through the work of estimating what the energy savings are from specific measures. I even think in the ____ meeting they talked about using the California model as the estimation of the savings from specific measures. But you don't have to go back and reinvent the wheel there, I think the real key is what are you willing to pay and how confident are you you're going to pay.

So you're saying adopt some of these deemed savings estimates and calculations but concentrate on what the rebate incentive amounts are, is that what I hear?

Yeah. I mean based upon the cost of energy and what you're trying to incent, you may say that we really want to incent any remaining conversions of T12's to T8's. You might pay more for lighting retrofits when they're 12 to 8 conversions than if it's 8 to super T8. You just have to figure out what you're willing to incent. But the savings estimates are there, the question is then what's the payment methodology and that will drive what you're incenting.

Good point. Michelle raised this idea about comprehensiveness in our programs. Do people have any comments on how that should be mandated or encouraged or fostered I guess. How do we encourage comprehensiveness? Comprehensiveness means rather than just do you know lighting this year and chillers next year, and heating next year, and motors another year, you can kind of pull them together. Any comments on whether and how that should be done?

Nobody. May not be an issue for hospitals that's right. A health sector is probably going to do more of the performance type analysis, doing multiple measures of any one project.

I think they have the advantage in the sector that they're pretty savvy in the _____.

But let me I guess let me ask this though, is it the experience in the hospital sector that they do all the measures that they're going to do over the next 5 years, do they all do them at once or do they spread them out? And if so, how do we manage that? What's been your experience in hospitals, do they lump them all together?

Typically the hospitals do the measures when they're doing renovations. So they're going to build a new bed tower and build a new MOB or have a major mechanical or electrical upgrade. We don't see an awful lot of the healthcare sector just saying okay I want to reduce my power, I'm going to spend this amount of money to do it. They usually do it as part of a process.

As part of replacing aged equipment and aged facilities.

Or an addition.

On additions, yeah, all right. Is that an appropriate way to proceed?

Well except that what we're trying to, not force them into, what we're trying to encourage them to do is separate energy projects. Now they'll be a lot of projects

that are part of a big project, but what we're trying to encourage is okay let's just look at energy and get it in there. There are tremendous opportunities here for renewable energy, does that count? If somebody starts running their generator at the facility to generate power, you know when you think about it from the 30,000 foot level, everyone of these hospitals has generators and you know you're 113 megawatts of-there's 113 megawatts of generators out there and if you incentivize people to run those at peak, for peak shavings you may be there with a program just like that. There's a lot of difference ways to skin those cats.

Yeah I did an analysis of a backup generator program for, not for this session but I could easily find 50 megawatts.

Easily and it really should to do this right, it should tie into sustainable energy efficient, it should really work with all the other agendas to do the right thing. And so if we can foster geothermal systems or biomass systems, wind, solar, you know it's tough sometimes to get some of those things to payback, but with incentives you know then maybe we're getting there. So we need to do the right thing along this process too.

In your experience when we're talking about they're doing, most of the time they do these energy efficient investments when they're doing upgrades of existing facilities or new additions, if they're building a new addition, does that routinely mean they're also doing some upgrades in the old part as well?

Most, I guess I could say most, not all, but most hospitals have a central plant. So if they're building a new addition and they need an additional thousand tons of cooling they may look at the existing chiller and say listen we've got two 500's now that are maybe you know maybe they're their old refrigerant, you know maybe there are 11 and maybe they're saying now it's time to take that chiller out and put in new ones. Or instead of a new 1,000 and 2 old 500's, maybe they put in 2 new 1,000's or maybe they put in three 1,000's and have redundancy. That's usually when they get the refrigeration upgrades anyway. They can do lighting almost anytime.

Okay.

But the big system upgrades come during renovations.

So in a hospital sector going back to an earlier point you made, do we offer this program for new facilities or are they eligible and do they have to be totally separate stand alone green field type facility or what if it's an addition on an existing facility? Where do you draw the line?

Right I mean right now UPMC is putting in a new hospital in Monroeville. We're doing the engineering for that.

A new stand alone facility?

A new stand-alone facility, it's going to be maybe 3 megs of additional load. You know the point I was making before is that's coming on, we need to account for that.

Does it qualify?

But if you know we have identified a number of energy saving systems there and they have accepted quite a number of them. I mean they want to make it a lead, silver hospital, so they're doing a lot already. But there are some energy conservation issues that may save peak, 100 KW or 200-300 KW and the associated consumption that they've said no, we don't have the money for that. But if the payback were 5 years on a system and you come in with an incentive program that makes it a 2-year payback, well then now it makes a whole bunch more sense. And these are big numbers at a pop. I think that facility is going to be about 300,000 square feet. And it's certainly it's going to hit the industrial sector and all the other ones too but that's sort of the way it goes in hospitals.

I hate to be the...if you're going to be taking a 5 year payback project and buying it down to 2 years, I think the one thing the utility has to look at is what's the cost per KWH or peak KW reduced that they're paying, you know what's the cost per each-and do they have other opportunities in other sectors? That's the biggest challenge you've got and that's why a sector by sector program, at least from design, you need to look at different sectors specifically and say these sectors are unwilling to move unless they can get X years payback. But the challenge you may have is you might have to pay \$350 per peak KW reduced in one sector and it might only be \$250 in another sector and the utility is going to have to make some real judgments there as to how they want to proceed. One thing to bear in mind.

Well I guess that raises a question, if we're doing a prescriptive rebate or even a performance based and we figure out we're going to pay X dollars per KW and X cents per kilowatt hour, do we set those incentive numbers regardless of the facility type?

Some utilities do such as Texas standard offer program says we pay X dollars per peak load reduced and Y dollars per kilowatt hour and you have to go through and basically do a deemed calculation of savings.

Right.

And they for new construction, they base it off of code and it depends upon which version of ASCHRE they're looking at. 90.1 2004, some utilities are looking at 2007 now.

Okay the time we've got left here maybe 10 minutes I want to talk a little bit about how we might implement these things in the sense of contractual arrangements. Three models if you will. Option A: Duquesne hires all kinds of engineers and staff people and they run these programs themselves, and do the audits and contract out some of that. Option B: is Duquesne hires a contractor to manage the program but then any particular project that comes up is reviewed by that overall project manager and so the project proposal can come in from a customer and it could be a bilateral, not a competitive bid between the customer and our contractor that they're going to submit a proposal. Three Option 3 is Duquesne could say we're not going to hire our own people, we're not going to hire a program manager contractor, we're going to hire a contractor that's the program manager and the program implementer. So the implementer not only does the program management but also goes out and recruits the participants, does the audits, arranges for the installation and all that kind of stuff. Any comments on these 3 versions if you will.

I guess my comment was in the third scenario, that's a big undertaking. I'm sure there are people out there that would welcome doing it but you know to run this program is a big deal and a lot of time and effort. I don't know whether that needs to come out of your \$20 million or not. Yah so if it does, I mean that's may be a couple million dollar consulting. I guess my opinion would be that maybe the second scenario where you had a company you know like us here already that sort of managed it but then you had other sub consultants underneath their umbrella to _____ sense.

Any comments on the line? We're about, our other group is breaking up so that's why you're hearing some background noise.

The first model, where you hire a lot of engineers and run it all yourself, that is probably the most difficult undertaking because you're not going to get the market, the strength of using the market of engineering firms, consulting firms, vendors etc., in your behalf. In the last piece where you just have one company who outsources effectively say that they're going to do everything, is probably as unrealistic, it's just divorcing yourself from doing it all yourself. As the gentleman just said, the middle ground where you have, either internally you build the staff to manage a variety of CSPs who are all delivering different programs to you, or you find one master CSP that's going to do that service for you and then rely on the market to identify programs which then are managed either directly by Duquesne by program managers in Duquesne or through a CSP that's acting as your program manager; those are the 2 big models that are out there right now

amongst all the utilities. It really comes down to how much energy does Duquesne want to put into program management versus managing one contractor who's managing program management for them. They both work.

Any other comments from our listening audience out there? I think we're going to wrap it up here if there's no other comments from the listening audience, how about the room here, anything else? We're getting the heads shaking back and forth, which is a no, I think.

The only comment I have is thank you for doing this.

Well I appreciate your chiming in it's been very helpful and I thank all the folks on the line and here for their contributions because it's been very- at least from my perspective- it's been very helpful and constructive. So give yourselves a round of applause go home and have a happy hour or something like that. Have a good afternoon.

Take care.