Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Decommissioning Funding Workshop

Docket Number: (n/a)

Location: Rockville, Maryland

Date: Wednesday, March 2, 2011

Work Order No.: NRC-742 Pages 1-200

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

DECOMMISSIONING FUNDING WORKSHOP

+ + + + +

WEDNESDAY

MARCH 2, 2011

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Workshop convened at the Nuclear Regulatory Commission, One White Flint North, Commissioners Hearing Room, 11555 Rockville Pike, at 8:00 a.m., Brian Anderson, Facilitator, presiding.

NRC STAFF PRESENT:

BRIAN ANDERSON, Facilitator

BRUCE BOGER

AARON SZABO

ANNELIESE SIMMONS

THOMAS FREDRICHS

LARRY PITTIGLIO

SUSAN UTTAL

ALSO PRESENT:

LESLIE KASS, NEI
LYNN GOODMAN, Detroit Edison
SARAH HOFMANN, State of Vermont
JAEGER SMITH, Entergy
BILL HORIN, Winston and Strawn
ADAM LEVIN, Exelon
JIM EMBLY, First Energy (via telephone)
RALPH ANDERSON, NEI
DAGMAR FABIAN, Crabshell Alliance
STEVE SHORT, PNNL
RICK ANDERSON, Dominion
JOSIE BALLENGER, GAO
JERRY BONNANO, NEI
DAVE KRAUSE, Duff & Phelps
NICK CAPIK, ABZ Consulting
REIJJI HAYES, Exelon
PAUL BAILEY, ICF Consulting
DAN WILLIAMS, Consultant
PETER KELLER, BNY Mellon

TABLE OF CONTENTS

P R O C E E D I N G S

8:02 A.M.

FACILITATOR ANDERSON: Good morning, everybody. Is my voice coming through the microphone okay? Can everybody hear me? Thumbs up in the back row? Too loud? Not yet. Okay.

Thank you all for attending. This is the Stakeholder Workshop on Decommissioning Funding for Power Reactors. My name is Brian Anderson. I'll be the facilitator for today's meeting.

I'd also like to introduce Mr. Bret Leslie. Bret's off to my right in the back row. He'll be assisting me in the facilitator role today. Certainly when we break out into two different sessions, Bret will be assisting with that.

The purpose of today's meeting is to discuss applying net present value techniques to discount the amount of a parent company guarantee used for power reactor decommissioning assurance. So the comments that we receive during today's meeting and following this meeting will be used to support an options paper that the Commission will consider.

So in addition to the opportunity to provide comments and ask questions today, there is still time after this meeting to provide comments.

Later throughout the day, NRC staff will discuss the logistics and the deadlines for providing comments outside of this meeting.

Chelsea, could I have the next slide, please?

So before we get started, a few housekeeping items to go over. There are copies of the agenda and presentation materials on the table in front of me and also on the table as you first came in the door to my right. Please feel free to pick up copies of whatever you need for the course of the day. If for some reason we run out of presentation materials or there are references or information that you don't see copies of, all of the information discussed here today, all of the supporting references will be posted in the NRC website after this meeting. So if you don't have a copy of something when the meeting is done today, you'll certainly be able to access that on line after the meeting is complete.

The presentation slides in this room and also in the separate Hearing Room during a breakout session will be posted on television monitors in the room so if you don't want to have a paper copy, you don't have to have a paper copy. They will be visible in the room. They will also be broadcast via webinar for those that are participating remotely.

We also have feedback forms, NRC public meeting feedback forms that are available on the table to my right. If you'd like, please take the time to share some suggestions with us on how we can improve our public meeting process.

As a general rule, to avoid distractions or at least to minimize distractions, please silence all mobile phones. I'd like to ask that you either check to make sure that they're off or that they're operating in silent or vibrate mode. It's usually interesting to see what the latest ringtones are, but we would appreciate being able to silence all those before we get started.

In terms of building security and escorts, at NRC headquarters visitors do not have unrestricted access. They are limited to where they can go without an NRC staff member present. In this room, the cafeteria, the restrooms immediately outside and in the corridor to the left as you leave, visitors have unrestricted access to those areas. So during a break, if you need to use the restroom or grab a cup of coffee or get a quick bite to eat, there are places that visitors can access in this room.

However, during a breakout session later this morning, that breakout session will take place in an area of the NRC headquarters building that requires NRC staff escorts in order to attend. So for those that are going to leave this room later in the agenda to participate in the breakout session number two that's labeled on the agenda, you will need an NRC staff escort in order to get to that room. We'll discuss the process and the logistics for doing that as we enter the break to that separate session.

In the unlikely event of an emergency and that we need to evacuate the building, there are emergency exits that take us directly outside from this room in the back two corners of the room behind you or we can exit the building through the front two doors, the door that you came in and also the door to your right off to my left. In the event that we actually need to evacuate the building, please just look for direction from either me or Mr. Leslie will direct everybody as to which direction we're going to go to safely get us outside.

There's a long series of presentations that we have. We have a full agenda today. And after each presentation, we're going to provide a question and answer session, a comment session associated with each presentation. So the format that we'd like to use for today is to allow the presenter to complete his or her presentation and then have a question and answer session once the presentation is complete. So we'll move from presentation to a question and answer session to a presentation to a question and answer session. And we'll move through in that sequence.

I'll certainly do the best that I can to address everybody's question, to provide you the opportunity to ask questions or make comments. In addition to the people that are here in person, we've got folks that are participating on line and over the phone. So I will rotate through the live audience as well as people on the phone to do the best that we can to address all questions and comments.

In order to try and keep up with the agenda though, we also have a wrap-up session, Q&A session this afternoon. So if for some reason there are a lot of questions for a particular agenda topic this morning and we don't get to all of those questions now, there will be opportunity for you to have your questions answered before you leave at the end of the day today.

So having said that, I'd like to go over a few ground rules that I hope that we can all adhere to over the course of the day. Because of the full agenda that we have and our desire to have as much dialogue and discussion for each topic as possible, I'd like to ask that everybody please be concise in terms of presenting, asking questions, or making comments. We'll certainly want to take the time to have sufficient discussion on each topic, but I ask that everybody please keep presentations short, questions and comments short, so that we can move steadily through the agenda.

I'd also ask that anybody that speaks to please speak into a microphone. That not only helps everyone in the room to hear what's being said or what's being asked, but it ensures that people on the phone participating via webinar can also hear clearly what's being discussed here.

We do have a transcriptionist that is keeping a record of all comments that are made here today, so speaking into a microphone is also an essential part of making sure that we have a clear transcript so that we can accurately address all the comments and consider those for the options paper that will be developed after this meeting.

Having said all of that, I'd also like to ensure that only one person speaks at a time. That ensures that we can get a clear transcript, that everybody can clearly hear and understand what's being said.

And it's possible throughout the course of the day that you will hear opinions or comments that differ from your own viewpoint. I'd like to ask that we all just be respectful of others and be considerate of opinions that might be different from your own.

Does that sound like a set of ground rules that everybody can adhere to today? Great.

Okay, thank you all again for attending. Without further ado, I'll turn over to Bruce Boger for an introduction.

MR. BOGER: Good morning, everyone. I'd like to add my thanks for everyone coming and also my welcome to the NRC.

As you start to prepare for workshops like this, poor Tom is going through the Goldilocks syndrome. Is he going to have nobody show up or is he going to have too many people show up? I think we had a good balance. It's not too few, not too many, but just the right amount of folks to contribute to the conversations and provide insights today.

I want to also provide special thanks to the folks that have been willing to make presentations and willing to lead some discussions, so thank you again for that.

I hope that as we get through the day you'll appreciate the importance that the staff has on decommissioning funding activities. This is one of those -- financial assurance is one of those things that spans cradle to grave at the NRC. So from the initial licensing all the way to the termination of the license, we worry about the finances. So that's why we're here to discuss this and underlying that is our desire to protect people and the environment.

So why are we concerned today as opposed to a year ago or two years ago or whatever? Well, if you look back at what we've seen since about 1998 when we required reports to be filed is that there have been a couple of instances where as a regulator we have concern. Regulators are paid to be conservative and nervous about things. And so if you look at what we saw happen in 2003 and 2009, a couple of things struck us. Of course, the downturn, that hit all of us. But if you look at the number of facilities that were impacted, look at the time it took to resolve the shortfalls, those are things that are of a concern to the regulator and that's prompted us to move forward in some areas.

Good news is that all of the shortfalls

have been resolved. That's great. However, the challenges that we face going through that led us to want to engage stakeholders and try to resolve a few issues that we could.

Basically, the goals, the first one is pretty easy. We want to make sure that adequate funds are available when you need them. That's a pretty high-level description of what we need in decommissioning funding. But we're going to explore that today. Those are some of the options to make sure we can get there is a primary topic today.

The second aspect or second goal really is to take a look at how things are reported, how things come into the NRC so we can have some level of confidence, some level of assurance that we're looking at the right things and looking at them in a similar manner so that our reviews will be consistent.

My view of the goals today, the first one that's up there certainly the Commission directed the staff to conduct a workshop as Brian indicated, to explore the discounted parent company guarantees. And so that's a primary aspect of the afternoon session. So we're -- we need your input for that.

But also, quite honestly, when you have this kind of talent and brain power in a room you want to take advantage of it and explore other areas. And so in this case we do want to explore with you some of the regulation with respect to cost estimate formulas and escalation factors. We're starting to think about that. We think that there may be some areas in there that we need to think about or maybe to improve. Your insights will be helpful in that regard.

Given the volatility of the market over the past several years, leads us to want to see whether there are other ways of looking at financial assurance so that we know what types of methods are out there and what ways we might be able to take advantage of in our reviews.

And the fourth goal is we have some guidance out. We're working on risks and we're looking on a draft Regulatory Guidance. The stakeholders' input on those are important, so we make sure that we address the areas that are most important to use well.

So here we are. We're looking for your inputs. We need your inputs. We seek your inputs. It's important to us. As Brian indicated, there are several opportunities for comments. Today is one, as he said it's transcribed and we'll take a look at those. But then there are some other comment deadlines on the regulatory information summary and the draft Reg. Guide and also final feedback on this conference. If you go back home and think about things that you wish you had said or wanted to say, then there's still an opportunity to get back with us on those.

I know you have a very busy day in front of you. There will be some separation of the masses, but coming back together this afternoon. I want to echo what Brian indicated. We feel very strongly about an open, collaborative work environment at the NRC and one aspect we're looking to you, it's your responsibility that if you have an issue or have an interest that you raise the issue or raise the interest so that all can benefit from that. But at the same time, be mindful of the respect you should have for others so that everyone's views are heard and everyone's views are understood.

So with that, I wish you the best. We've got a lot to do. Do a great job today. Thanks.

Aaron Szabo is next up.

(Applause.)

MR. SZABO: Good morning. I'm Aaron Szabo, Financial Analyst with the NRC.

I'll be speaking with you today about two draft Guidances we have out. One is draft RIS 2010-XXX which is 10 CFR 50.75 reporting requirements for decommissioning funding status reports and draft Reg. Guide 12.29, revision 1, which is a draft version of Reg. Guide 1.159 which is assuring the availability of funds for decommissioning nuclear reactors.

Next slide.

This is just a road map of what I'll be going over. First, I'll be talking about the RIS 2010-XXX which was originally published in the Federal Register on November 26, 2010. And just talks about the general reporting requirements for the decommissioning funding and the status reports.

Specifically, I'll be going into what drove us to develop this new RIS, what it states and what the staff is hoping to see for the upcoming DFS reports which are due March 31st this year, to the end of this month.

I'd also like to just point out now that if you are curious as to how we do the evaluation of these DFS reports, we do have LIC-205, Rev 4 up and the ML is posted on this slide. It is publicly available for anyone to view.

After I talk about the RIS, I'm going to be going into the draft Guide, DG-1229, Revision 1, and just speak on how this differs from our initial draft Guidance, just generally on that. I would like to point out, as Bruce pointed out, that the comment period for these two documents is different than the comment period for this workshop. The RIS has a due date of this Friday, March 5th, which was extended from the original due date and the Reg. Guide comments are due by March 24.

Next slide, please.

Just general background. Initially, the Office of Inspector General in 2006 audited the decommissioning funding status report analysis process and IG suggested that the NRC begin verifying the trust fund balances of the licensees through the trustees instead of relying on the licensees' submittals. In November 2007, the staff sent an option paper to the Commission, SECY-07-0197, asking the Commission to choose between maintaining the status quo, spot checking the licensee trust fund statements at the location of the originals, or beginning a rulemaking process to require the trust fund trustees to submit statements of the balances to the trust fund to the NRC.

In 2008, the Commission came back and accepted the option for the spot-check process which the NRC has been performing periodically. As of today, the NRC has completed 142 of the 189 spot checks which is divided by owner and plant. So we've done almost three-fourths of those. And currently, the staff does have a draft appendix to LIC-205 which will be coming out in Revision 5 that goes over exactly what our process is for the spot-check process.

The staff has observed through this process that there is a potential lack of communication between licensee and the NRC, therefore, one of the reasons why we decided to make the LIC-205 publicly available, as well as the reason why we created this draft RIS.

Next slide, please.

There are seven items that need to be submitted. According to 10 CFR 50.75(f)(1) and (2), we're simply going to be looking at (f)(1), therefore by March 31st, as I stated earlier, at the end of this month, they must submit all seven of the items stated above.

I'm going to be going through the next couple of slides just going through exactly what needs to be stated, just to make sure that we don't have to send out RAIs and go through a long and expensive process.

Next slide, please.

Item 1 is the minimum decommissioning funding assurance. This is based on 10 CFR 50.75(c). And some of the things that we have been noticing through doing this process is that BLS, Bureau of Labor Statistics, numbers by the end of this March are preliminary in some cases. For the sake of this analysis, we will be using the preliminary numbers initially. If we do discover any shortfalls, we will wait until the numbers become finalized before taking any action and just also for historical purposes, we will be using the final numbers. We'll later update them. And just for reporting purposes, you can use most recent available numbers which are preliminary in this case.

Next slide, please.

In relation to Item 2 which is the amount accumulated at the end of the calendar year preceding the year of the report, we have noticed just a couple of things during our spot-check process that we've put in our RIS. The first thing is that it should be the actual amount in the trust fund, not the minimum, as well as we suggest that the market value would be a better indicator instead of the book value in relation to the amount in the trust fund, just in relation to we believe that if they're liquidated right now, if necessary, this would give us more accurate description of what is the amount that's in the trust fund.

Also, the licensee may report, if they wish, the state costs, the spent fuel, and any other costs. That is not a requirement, but they must report the radiological decommissioning funds. Also, if they wish to report all of those, we do need them broken down by their purpose. And also, any funds that are held outside the decommissioning trust fund are not to be reported at this time.

Next slide, please.

Next is the third item which is the annual amounts remaining to be collected. If this does apply to the licensee, we do prefer a year-by-year breakdown. Once again, during our spot-check process, we just noticed that there are some years that have significantly larger amounts of funds than others that if you provided it to us and it's an overall amount of total to be collected, we would miss this in our analysis.

There have been no omissions that we have observed from any licensees, but just for continuity, transparency, and efficiency, the staff would just prefer a year-by-year breakdown.

Next slide, please.

Another item, Item 4,is our escalation rates which LIC-205 does address, how the staff addresses any escalation of greater than two percent which the NRC does allow a greater than two percent return. Although we have observed licensees have submitted how much they get from their PUC, whether it is larger or smaller than two percent. Of course, based on our regulations we provide two percent or greater. For all instances though, the licensee should provide the PUC order that allows for this rate of return. Also, exactly how the breakdown is, whether the PUC just provides a total real rate of return or whether a real rate of return minus escalation or other expenses or other factors.

And the final thing that should also be provided is if the PUC grants this greater rate of return through the decommissioning period. Staff will just generally assume that they do not grant it through the period, but if that's not the case, we would like to have some -- the information based on that. And once again, this is just another thing that will help prevent us -- the need for RAIs and

Responses.

Next slide, please.

We've grouped Items 5 through 7 together which they must be reported, but do not apply to all licensees. These three steps deal with changes in the contractual obligation, commingling of funds or material changes to the trust agreement which do require prior written notification under 10 CFR 50.75(h)(1)(iii).

If you are unsure if you have had a modification, you can provide the NRC with additional information in your submittal, explaining what occurred and we will evaluate the information submitted. It's best to err on the side of extra information than not enough.

Next slide, please.

The next part of the RIS talks about site-specific proposals. Site-specific proposals will not apply to all licensees when submitting their DFS reports. However, under 10 CFR 50.75(f)(3) at or about five years prior to the projected end of operation, the licensee must submit a site-specific cost estimate. The licensee is also permitted to submit a site-specific cost estimate prior to the at or about five years for the purpose of the DFS report.

However, if the licensee does wish to submit this site-specific cost estimate, it must be equal to or greater than the amount determined by 50.75(b) and (c).

What the NRC is looking for in relation to its site-specific cost estimate in the DFS report is specifically the actual site-specific cost estimate that they have provided either to the NRC or to a PUC, specifically the most recent submittal. And if it wasn't done, provided in the most recent year, so 2010 for this reporting cycle, that they provide some sort of cost escalation up to 2010 dollars.

Also, if this was not provided to the NRC -- well, even if it was provided to the NRC, we would like a citation from where the site-specific cost estimate was previously provided if that applies.

Next slide, please.

In relation to our calculation of how we go through a site-specific cost estimate, we follow the same LIC-205 procedure for the operation of the plant and after that because we are going to be using it usually, a site-specific cost estimate provides a different decommissioning period, type of decommissioning, we will follow a different process which is for each year during decommissioning we first subtract the annual costs to be incurred. And then provide a two percent real rate of return unless a higher amount is provided -- is allowed. And then we'll just continue this process through -- until either the trust fund is depleted or the decommissioning period is over.

Next slide, please.

We've only received one comment thus far, which we received in December 2010 from NEI. And it was on the site-specific methodology that we use. And their comment was that the staff should not deduct the full amount of the expenses before crediting the licensee with the real rate of return for that year. NEI's comments specifically stated that when they choose the decom. method with immediate dismantlement as we do in the LIC-205 process for the normal -- for when a DFS is just normally analyzed, that we take a midpoint there and grants the licensee credit during the year as the expenses are drawing from the trust fund. The staff is currently reviewing the comment by NEI to determine whether there is a better way to do the site-specific proposal analysis and whether the current process should be modified.

Next slide, please.

On to DF-1229 Rev. 1. In relation to the initial draft Guidance, the staff developed a SECY paper, SECY-10-0084, which explained the changes to the Guidance. In response, the Commission voted on the proposed changes and provided a response on October 25, 2010 which voted against the proposed change to the draft Guidance.

There are three changes made between the original draft Reg. Guide and the new revision. The first was the addition of two definitions. The second was a modification to safe storage costs and finally the change was on -- the last change was when adjustments to the amount of funds set aside for decommissioning should be made.

Next slide.

These are the two definitions which are available if you go to the draft Guidance. It's on decommissioning. We define what decommissioning funding assurance is and what shortfalls are.

Next slide.

The next change is, as we stated on safe storage, and this draft Guidance explicitly states that for safe storage, the annual cost to maintain the unit or units in safe storage will be subtracted from the amount of credit allowed. This is just saying that for each year, even when there are smaller costs, that will be subtracted from the amount.

Next slide, please.

And the biggest change which is the change from the adjustments to the amount set aside. The initial draft Guidance stated that for non-electric utilities which are licensees that are no longer rate regulated or do not have access to non-bypassable charges, should make adjustments every year. When the Commission voted on the proposed changes, the Commission voted to retain the current directive which states that non-electric utilities should make adjustments every two years in conjunction with the subsequent decommissioning funding report and electric utilities should make the adjustment as necessary, but at least within the five years.

And that's it. Questions? Comments?

FACILITATOR ANDERSON: Thank you, Aaron. Does anybody -- I see a couple of hands. I'll bring a microphone to the folks that are here at NRC headquarters. I would ask that again, please speak into the microphone and if you could identify yourself by name and any organization that you represent.

MS. KASS: Good morning. I'm Leslie Kass with NEI, the Association for Nuclear Energy and all the operating reactor licensees.

My comment is related to the RIS. As you mentioned, I just wanted to reiterate that and there were several things in the RIS and in some of the recent Guidance that are just that Guidance. I want to make sure that you understand the licensees will, of course, follow the letter of the regulation. But some of the things in the RIS and the Guidance are kind of requests from the staff. And you talked about burden, placing burden on the licensees. We're always happy to provide additional information as the staff needs to perform their analysis, but some of the prescriptive requests that are outside of the actual regulatory requirements may or may not make sense for all of our licensees. And again, it's Guidance. So we would just ask that you keep that in mind as we submit our responses.

And of course, you know you said you will evaluate what makes sense. We just feel that mathematically, the comment that we have provided on the RIS relative to the draw-down period and calculating interest during that time frame, we certainly wouldn't remove all the money at the beginning of the year for any of these activities. We would pay them as we go and the midway point is probably fair and could be adjusted if we find something different actually happening. But typically the work is performed and then you pay, so things would actually push out a little bit beyond that.

Thank you.

FACILITATOR ANDERSON: I saw a couple of other hands in the room here at headquarters.

MS. GOODMAN: Lynn Goodman, Detroit Edison. I just want to clarify regarding the reporting as far as the rate of return. What we need to report is the real rate of return compared to escalation, not the actual rate of return we've been earning, is that correct?

MR. SZABO: Correct. It's the amount that the PUC has allowed for those that are regulated, not the actual amount that you have at that time.

FACILITATOR ANDERSON: Next question.

MS. HOFMANN: Sarah Hofmann, State of Vermont. Since the goal is to have enough funding at the termination of operation when it is expected, is there any consideration in the decommissioning funding assurance that a plant can use SAFSTOR or is this really geared to having enough money at the time of the expected termination of operation?

MR. SZABO: Well, our regulations currently allow for licensees to use a SAFSTOR method.

if they do not provide us a site-specific cost estimate that uses SAFSTOR for our initial DFS report analysis, we do assume immediate dismantlement. However, the licensee is allowed to provide us another option if they provide us all the costs for that.

FACILITATOR ANDERSON: Are there other questions or comments here at NRC headquarters?

MR. SMITH: Jaeger Smith for Entergy. Aaron, I had a question about the rate of return post-shutdown during the decommissioning period and I believe you said that the staff will assume that I guess it's zero return during decommissioning if the PUC hasn't specifically stated that there is some return there. So my question is why is that -- what's the basis for that assumption? And what do you do in an instance when a PUC has been silent about that particular aspect?

MR. SZABO: Just to clarify. It's not a zero percent real rate of return. It's a two percent real rate of return is what the staff would assume during the decommissioning period. And if the PUC is silent on that, that is what we would assume, just the two percent. It's if you wish to be allowed an amount greater than that two percent, we would require some -- we would ask that you provide some sort of PUC order, I guess kind of backing up that allowance.

FACILITATOR ANDERSON: Any other -- several other questions here in headquarters.

MR. HORIN: Good morning. Thank you, Aaron. Bill Horin with Winston and Strawn. Just a quick question on the use of the Bureau of Labor Statistics. Licensees will often pick or have picked, I've seen, you pick a date when you're preparing your report and we've gone back and in some cases we'll just take whatever the latest final that is. That may not be December. And I just want to make sure that that's acceptable also. I mean we explain, licensees would explain that, but rather than using preliminary data, we use the latest final which could be in October or something to that effect.

I just wanted to make sure there's nothing specific in the regulations and so from that perspective we thought that was a reasonable way to go.

MR. SZABO: For the staff's analysis, we will be using the December preliminary number. Of course, as you say the regulation does state that it is the most recent available data if the licensee does provide the most recent final, we would review that. But in relation to if there are discrepancies between what the licensee believes is the minimum decommissioning and the amount that we believe is minimum decommissioning. One of the reasons why I said we will not make any -- take any actions, we'll wait until those December numbers become finalized, because we do understand that you shift a little bit from preliminary.

FACILITATOR ANDERSON: Any other questions or comments here in the audience?

MS. KASS: Leslie Kass with NEI again. On DG-1229 and Section 2.1.5 where you talk about rate regulated utilities should report to their Public Utilities Commissions, this language was adjusted from the original DG-1229 in response to our comment, but the adjustment still implies that somehow our licensees can ask their regulator to address a single line item of decommissioning funding in a rate case. And in many cases, they do not have the statutory, the PUC themselves, do not have the statutory authority to do that and typically deal with rate cases on a larger basis for a number of factors. And so we still find this language problematic as it's somewhat out of our hands and kind of goes over into the jurisdiction of our utility regulators. So we will ask for another go at that so we can get it right.

MR. SZABO: Thank you.

FACILITATOR ANDERSON: Do I see any other hands here in the audience at NRC headquarters?

MR. LEVIN: Adam Levin, Exelon Generation. Specifically to the paragraph that Ms. Kass was talking about, I'll highlight it very clearly here, but what we're looking at is a suggestion which leaves the first full sentence in that paragraph, leaves the last full sentence in that paragraph in the existing document and deletes everything in between.

MS. SIMMONS: I'm Anneliese Simmons and I work with Aaron as a financial analyst. I think in respect to informing the PUCs, the idea there is that, of course the NRC relies very heavily on the state regulators in many cases to work in concert with the NRC. And the spirit of that guidance was to make sure that state regulators are informed very early on in the process. We understand that that might be far in advance of a rate case, but we do feel that that's something that the licensee needs to take proactive action on and that that's very helpful because it's in everyone's best interest to make sure that we're all on the same page.

FACILITATOR ANDERSON: Let me use this as an opportunity to check in with folks on the phone.

Does anybody that's listening over the telephone have a question or comment based on Aaron's presentation?

(No response.)

FACILITATOR ANDERSON: Can I have anyone that's listening on the phone just say that they have no questions so I can confirm that you're actually on the phone?

(Chorus of no questions.)

FACILITATOR ANDERSON: I understand that people are listening by phone. Thank you for confirming that for me.

Chelsea, do we have anybody that has submitted a question via webinar? No webinar questions at this point. So I'll go back to the audience here at NRC headquarters. Any other questions or comments?

MR. FREDRICHS: This is Tom Fredrichs of the NRC staff. I just wanted to comment on an earlier question, I believe that Sarah Hofmann had, about when the trust funds are expected to be covering the amount. And while we do have a SAFSTOR which allows taking credit after shutdown, the regulations for the trust funds do state that they're expected to have adequate funds at the time permanent termination of operations is expected. So I just wanted to let people know that that is in the regulations.

FACILITATOR ANDERSON: Thank you, Tom. One last check for questions or comments on this topic. I don't see any other hands here in the audience. I'll check for the phone one more time. Does anybody on the phone have a question or comment?

MR. EMBLY: Yes, there is one question. My name is Jim Embly. I'm with First Energy. What I understood is that for this year's reports, the expectation is that we use the RIS-2010-XXX to develop the report. If I did understand that correctly, when is the NRC going to issue that RIS?

MR. FREDRICHS: Hi, this is Tom Fredrichs of the NRC staff. And the RIS at this point is only draft so it doesn't really apply to what you're doing. We wanted to get out this draft to give some guidance about what we'll be expecting and I think we tried to structure it such that it's pretty much what people are doing and what we understand. We did want to get it out for comment.

It takes some time to get it issued as final. It will be after March 31st so hopefully within the next few months. Does that answer your question or do you have anything more that you'd like to say about it?

MR. EMBLY: No, so then I'm assuming that if it is just draft, we should use it as guidance, but it's not mandatory until the actual document gets published?

MR. FREDRICHS: Well, it's not actually mandatory at all since it's guidance, but you're correct. It's not exactly in effect right now, but it does give you an idea of what we're looking for and if there's information we need that's not in the report, we'll contact the licensee and perhaps have a request for additional information.

MR. EMBLY: Okay, thank you.

FACILITATOR ANDERSON: Thank you, Tom. Any other questions on the phone right now?

(No response.)

MR. HORIN: Bill Horin with Winston and Strawn. I just want to reiterate what Tom said and what Leslie said is that this is guidance and so to the extent people were considering this as somehow mandatory, there's only guidance in the suggestions by the staff as to what they would like to see in some circumstances, but it is guidance and it's not mandatory at all on licensees.

FACILITATOR ANDERSON: Any other questions or comments here at headquarters? It does not appear that there are.

Any more questions or comments from those on the phone? Great.

Aaron, thank you. Thank you, everybody, for your questions and comments.

(Applause.)

The next presentation, Larry Pittiglio and Steve Short. Actually, there are two presentations here. Larry, you're going to go first, and then Steve's presentation is second.

MR. PITTIGLIO: The first presentation we're going to discuss the overview of our evaluation of the formula. Before I start, I'd like to take this opportunity to introduce Steve Short. Steve has been with PNNL and has actually worked on this area for NRC and I've worked with him for almost 30 years now. So we're very happy to have Steve's supporting us on this effort and we are working on that.

I also wanted to take the opportunity on the left to introduce my branch chief, Chris Regan, is here. If you haven't had the opportunity to meet Chris, so since he's here, if you have any questions in the end, ask Steve the hard ones and me the easy questions.

All right, we're going to start.

Next slide, please.

Basically, we were directed back in 1996 to take a look at the formula. What happened, we had some funding issues and we actually did not start until about two years ago. So we were behind on getting started on the formula reevaluation. The projected end may be late 2011. Actually, it's going to be about a year from now because of some budget constraints. We pushed the effort into FY2012. So it will be actually a year from now before we have some definitive recommendations. So when I tell you we really don't have a decision at this time that is really an honest answer.

Next slide, please.

The initial formula was based on studies that was done in the early '70s. Again, PNNL did the study. They looked at two cases. One, of course, was the Trojan plant and the other one was the Columbia plant, to look at generic costs for both PWRs and BWRs.

Next slide.

Later, in the mid-1990s, we came back and updated those studies, so that was done again about 15 years later. And that's where we are at this time. Note at the bottom, neither of the original studies addressed many areas that we are now looking at which included site remediation, property taxes, decommissioning strategy, plant-generated waste or in operations.

Next slide.

So we decided to go in and reassess the formula. The intent was to make sure that the formula reflects the current costs associated with the decommissioning. The results of the evaluation may require us to change the formula. And our goal is to align the formula also with site-specific cost estimates.

Over the 30 years, the decommissioning strategy and practices have changed dramatically and we've also received a lot of updated information from the licensees regarding site-specific cost estimates. So we're using all of that in our continued reevaluation of the formula.

Next slide.

We also recognize that the formula really didn't look at low-level waste management and clearly the cost of low-level waste is a big issue. At this time, we're also concerned about waste that's generated during operations and whether or not there will be any available capacity to bury that waste before decommissioning comes into play. And currently, we do not have any place for disposal of B and C waste.

Where are we at this thing? As I said before, honestly, I can tell you here today that if you ask me are we going to change a formula, we have not drawn a conclusion on that basis. We're still in the process of looking through the information that we have available. There is a table that I put out in the front that I use as a reference for both this and the discussion on NUREG-1307 and it really identified 30 site-specific cost estimates that we've received over the past years.

FOIA reference, it provided the ML number, so that if anybody wants to go look at the licensee submitted cost estimate, the ML number is listed. It's available in ADAMS, publicly available. And there were more than 30 different options, disposal options that we looked at. I have more copies of the chart and when I talk a little bit about the low-level waste, I'll have the identified ML number for you also.

So at this stage, if the formula and again, if it gets changed, it may address site remediation, property taxes, decommissioning strategy, impacts on life extension. It may account for some of the waste that's generated that's not disposed of. We're looking at the B and C classed issue with the waste and what's going on after permanent shutdown.

Again, at this stage, we're collecting information. Just as a reference, a lot of the site-specific cost estimates came in under the 50.75 requirement that said at or about five years out, the licensees are required to submit a preliminary decommissioning cost estimate and we received several of those, although some of the plants have now gone through license renewal. They were a very good basis for what we looked at.

We are currently looking at information that we've gained from Yankee Rowe, Maine Yankee, Connecticut Yankee, Trojan, Rancho Seco, so that we have some real world information that we're looking at. And we're trying to assess the different impacts and costs that are associated with the actual decommissioning before we can make any recommendation on the formula.

That's where we are today. In all honesty, it will probably be this time next year, as I stated earlier. Our initial goal was to make a recommendation to the Commission maybe in late 2011, but due to some budget constraints, we've pushed the workload into 2012, FY 2012, so it's probably going to be this time next year before we have a recommendation.

The last slide is just the formula itself as we know it today.

Do we have any questions?

FACILITATOR ANDERSON: Thank you, Larry. Any questions or comments, here at NRC headquarters for Larry?

MR. ANDERSON: Ralph Anderson, with the Nuclear Energy Institute. Thanks very much for the information, Larry. That was very informative.

I just make the comment that during that period of time in looking at the low-level waste related issues, because of the significant number of changes that are taking place, both in the regulatory framework and in the infrastructure, you might want to consider somewhere along the line having a public meeting opportunity to make sure that you're well informed on all the different changes that are taking place.

A couple of simple examples, as you're probably aware, the Texas Compact Site is on its way to operation and that Compact Commission, for example, has already approved a process for disposing of out-of-Compact waste. That would be a change on the statement that there is currently not an outlet. NRC itself is contemplating changes to the Branch Technical Position that classifies waste with the expectation it probably will create more flexibility.

Utilities themselves have adopted practices as a result of the restriction of access for disposal of B and C waste such that in two years, we've already decreased the volumes of such waste by 20 percent and expected to decrease it considerably more.

So the point is there's a lot of changes taking place and I think it would be good to create an opportunity to get a broad range of people in to make sure that you take those into account.

MR. PITTIGLIO: We agree with you one hundred percent. In fact, that was one of the comments that Steve has made from PNNL that the whole waste issue has changed dramatically. And as a matter of fact, I talked to Jim Shafter in our Low-Level Waste Group who forwarded me some information about a meeting in Texas on the actual rate structure today, scheduled for March 10th. So we're well aware of, as you pointed out, the significant changes that are almost occurring daily related to low-level waste.

FACILITATOR ANDERSON: Thank you, Larry. There's another comment.

MR. SMITH: Jaeger Smith with Entergy. Larry, I have a couple of questions about two of the items that you mentioned in your --

MR. PITTIGLIO: Could you speak a little closer?

MR. SMITH: I had a question about first site remediation. My understanding is that site remediation, the NRC has consistently maintained that that's beyond its jurisdiction, so I'm wondering if you could speak a little bit on why that might show up in the formula.

And secondly, you also mentioned property taxes. And my question is I'm wondering why that should be considered inasmuch as property taxes on the site itself are for certain persist before and after the decommissioning, and of course, during operations as an operational expense. I'm wondering why property taxes would be in the formula?

MR. PITTIGLIO: Property taxes was an indirect question and I may let Steve comment on it also, but when we looked at many of the site-specific cost estimates that came in, specifically when we looked at the SAFSTOR period which was 30, 40, 50 years, we saw property taxes in the tune of over $100 million that were costs associated with SAFSTOR. And that, I think is what Aaron touched on a little bit about the concern of what is the annual cost of keeping that plant while it's sitting there in SAFSTOR.

So it is a big cost when you start talking about $100 million. It's something that we never considered at the time. Probably when we looked at the formula we assumed that the plant would go into immediate dismantlement, probably would be completed within seven years, but at that time we didn't have an issue with where the spent fuel would be stored or low-level waste issues.

So as we look at these costs and we looked at the licensees' submittals and again, there's over 30 of them identified on our table. Property taxes was identified in big numbers in almost every submittal that we receive.

FACILITATOR ANDERSON: Steve, I've got a microphone for you.

MR. SHORT: I don't really have a lot of comment on it. When we originally did the evaluation which of course the current algorithms is based on studies that were done back in the '70s. And those numbers, what we had in there was based on some assumptions back in those time periods. And so all Larry is saying is we're going to be looking at what's currently making up the decommissioning cost estimates.

Let me come back so we can get a clear transcript, use the microphone.

MR. SMITH: Yes, I was wondering if you could comment on the site remediation issue.

MR. PITTIGLIO: On what now?

MR. SMITH: Site remediation issue. I believe you had indicated --

MR. PITTIGLIO: Well, yeah. I mean that's just something that the site remediation costs we recognize aren't necessarily part of the current -- are not part of the current decommissioning costs. But when we look at the breakdown of annual costs associated with the plant, especially with SAFSTOR, every one of our studies identified basically three categories: cost for dismantlement, radiological cleanup, the site remediation and spent fuel cost.

So it's something we're looking at. Again, we recognize that if there's any change to the formula, it would require rulemaking and it may be something that we want to consider. It's just a factor at this time, like property taxes that has influenced the cost of the plant.

MR. SHORT: Yes, in general, site remediation is not part of the algorithm, but you can envision, especially if that cleanup is associated with a cleanup below the NRC requirements, 25 millirem per year requirement. If you've got to clean up the site to meet that requirement, then that clearly should be part of a minimum decommissioning fund requirement.

Of course, our challenge is most plants -- of the three plants -- of the four plants we were looking at, only one of those really had a significant amount of site remediation that they had to do. So whether that goes into an algorithm or not, it's still something we have to discuss.

MR. FREDRICHS: This is Tom Fredrichs from the NRC staff. When you think site remediation, where are you, Jaeger? There you are. I'm looking around the column here.

To some extent, you understand that is clearing buildings that are non-radiological, but the other thing with the formula as we have it today, it assumes that there's no soil contamination or groundwater contamination and that's part of the remediation that is radiological and it can be very expensive. So that's something we need to look at to see if the formula captures those types of costs.

FACILITATOR ANDERSON: I think there were other questions.

MS. FABIAN: Yes, I have one.

FACILITATOR ANDERSON: Go ahead. Over the phone.

MS. FABIAN: Right. Dagmar Fabian, Crabshell Alliance, Baltimore.

I am not very familiar with all those regulations, but could I see your Slide 9 again? Would you kindly explain some of the parts that go into the total dollar cost and how you divvy it up and how you come to these numbers, please?

MR. PITTIGLIO: Slide 9 reflects the formula as it is in the regulation today and it's based on a combination of factors: labor, energy, and burial costs. And I think Aaron talked a little bit about using the Bureau of Labor Statistics numbers. They are what really dictates the labor costs and the burial costs.

When you apply that formula, you'll look at the specific costs related to the section of the country that you're in and also you'll look at the low-level waste factors that we provide in NUREG-1307, currently Revision 14 that will give you the factor that you use as input to derive the total formula, minimum formula amount.

So it's really based on a combination of factors again. And that's what the formula reflects today. And again, what we're looking at are what has changed since 1970 that may or may not be included in the formula such as soil remediation and other items that were not initially considered. But again, the formula is based on the three factors and the percentages that you see identified above. The amount related to labor and to energy are taken from the Bureau of Labor Statistics. In NUREG-1307, we do not provide those numbers, but we put a link to the website for the Bureau of Labor Statistics so you can go in and pull those numbers.

MS. FABIAN: Specifically Bx, the burial/disposition costs, are you basing it on something already has taken place like in -- or is it -- what is it based on?

MR. PITTIGLIO: The Bureau -- and I may let Steve talk to you a little bit about that and our next slide is really going to talk about the burial factor in NUREG-1307.

MS. FABIAN: Yes.

MR. PITTIGLIO: But what it does -- and PNNL has been under contract with us for again probably another 30 years -- and they have a program where we run components and come up with the factors.

Now when you look in NUREG-1307 there's a table that will reflect what number you apply for computing the burial costs. And it's in Table 2.1 and on the current version of NUREG-1307, it's on page three. It's entitled "Values for Bx is a Function of Low-Level Waste Burial Sites, Waste Vendor and the Year."

So it's a mechanism by which you come up with the number that you have put into the formula.

Steve, do you want to add anything on that?

MR. SHORT: I don't really have anything much to add. The algorithm is based on again cost estimates that were developed back in the '70s. The algorithm is simplified as a simplification of that cost estimate which was developed at a fairly low level of detail.

We strive to divide that into three categories: labor, energy, and burial. And of course, since those costs have changed significantly since 1986, we have to provide a way of escalating those and so like Larry said, NUREG-1307 shows you exactly how to do that.

MS. FABIAN: Do you expect to have something like a multiplier be in effect now because the costs are so much higher like times two or does it have to be amortized in order to get more deeply into the costs of each of the parts?

MR. PITTIGLIO: I am not sure I quite understood the question. Did you?

MS. FABIAN: Maybe -- can we expect that the costs that was proposed for 1986 adjustments would be two, three, or four times higher in 2011?

MR. PITTIGLIO: Well, I tell you what, if you go back and look at Table 2.1 in the NUREG, you can see what the changes are since 2000. We don't go back farther than that in the Revision 14, although other earlier revisions do. But you can see the dramatic changes by looking in the same category in the NUREG from 2000 to 2010.

An example would be in values for the Washington site, under direct disposal, the factor for 2000 was 2.23. And the factor for 2010 is 8.035. So there's a factor of 3.5 times, as an example.

So my suggestion would be, and the NUREG is readily available, take a look at the table and it gives you an historical example of what has occurred in simply the last eight years as far as waste disposal costs.

The introduction in the abstract, we talked about it. There's been some dramatic increases.

MS. FABIAN: That's exactly what I understood from you, so just this one example gives me an idea that you know, a multiplier of eight is now out of the question. Thank you.

MR. PITTIGLIO: You know, and in fact, some of the numbers that are in the NUREG which we'll talk about at the next presentation following this one, are based on Barnwell numbers which we've escalated and in reality that's the best number that we have available today. When we do the next version of this NUREG-1307, we may have some numbers from Texas, the new facility will be opened up and there may be some dramatic increases. If you read the abstracts closely, since we've been working on this in 2006, we've always put a warning in that we recognize disposal costs are going on. When new disposal facilities become available, there may be some dramatic increases and we've actually recommended to the licensees that they may want to consider setting aside some additional funds to offset what happens when a new facilities becomes available. So we're well aware of the concern about rising low-level waste costs and it's something that as we discussed in the formula also that we're looking at.

FACILITATOR ANDERSON: Thank you, Larry. Your next question will be at NRC headquarters.

MS. HOFMANN: Sarah Hofman, State of Vermont. I have a comment and a question. The first is I also happen to be one of the former Texas Commissioners from the State of Vermont. I was the alternate at the time the importation vote was taken. And yes, we have -- just a cautionary note. We have a process for importation now set up, but there does have to be another vote that the Commission has the resources to actually review those petitions before any of them are going to be entertained. So that's -- and since the Texas Compact Commission is on a very tight budget, that might be quite a ways away.

My question is in two of your slides you have the words "decommissioning strategy." I assume all the industry people in the room know what that means, but I actually don't. Does that mean SAFSTOR or does it encompass more than that? What does decommissioning strategy encompass?

MR. PITTIGLIO: Well, decommissioning strategy could be SAFSTOR and in some cases it's a combination of doing some immediate dismantlement, letting the plant sit, and then completing decommissioning.

When we looked at many of the options that were provided, recognizing that there is still a problem with what's going to happen with the spent fuel, it's dictated different strategies to address really what they're going to do with the fuel and it may well be, there's an option of leaving it in wet storage or moving it to dry storage, moving it under dry storage in a site-specific license which could then result in terminating the Part 50 license or leaving it under the general Part 50.

So the strategy is simply how the licensee intends to address the fuel issues and eventually the complete dismantlement of the plant.

MR. LEVIN: Larry, thank you. Adam Levin. Exelon Generation. A couple of comments and observations, I guess. The first is that you mentioned that one of the goals going forward was to align the formula amount with site-specific cost estimates that you've received, had some input on. So I do appreciate that.

One thing I do want to say having been involved in cost estimating myself for a number of years and now currently being responsible for Exelon's fleet of 21 cost estimates, the existing formula that's in regulation has turned out to be a remarkably accurate and robust proxy for site-specific cost estimates over the past 25 to 30 years. It has held its own very, very well. I can tell you that, in general, for the BWRs, a site-specific decom. estimate may run a little higher than the formula amounts. For PWRs, they might run a little bit lower than the site specific or than the formula amounts, but they're within plus or minus 15 percent. They do a very, very good job of being where we should be today.

The other thing I did want to mention is that there's been quite an expanded experience base of decommissioning. We've completed nine plants, I think there's some 20 others that are -- or 10 others that are in the process of decommissioning in some way, shape, or form. And there's a lot of real world data out there now that I know myself and some of my peers that are in the room here today are more than happy to provide and contribute to whatever you are putting together here.

And I would look forward to a public meeting to solicit comments from those folks that have been through this experience because each and every decommissioning to date, and, I believe, going forward, will be in some respects its own unique project. So I think it's good to at least understand where the nuances are as best you can as you go forward in trying to put something that's a little bit more globally rolled up, if you will, as a site-specific formula.

MR. PITTIGLIO: Let me just say that we're here today and we're very early on in the process and the reason we're here today and very early on in the process and really don't have a recommendation was to make sure that all of you, because this workshop was being held are aware of what we're doing and that you will be involved in the process. So I mean when I honestly say and it's not pre-decisional, I don't know where we are on this formula. I look you straight in the eyes and tell you that. But that the intent here was to make sure that there were no surprises. We are working on it. We received direction to do it. We had a late start due to some funding issues. It's been pushed out farther than I had hoped due to some funding issues, but we will certainly have public involvement. I appreciate Ralph's comment about the low-level waste issue. That's certainly a big issue. It's an unknown and it's a continuously changing unknown. And we're struggling with addressing that ourselves.

MR. ANDERSON: Thanks, Larry. This is Rick Anderson with Dominion. No relation to Ralph. I would like to tack on to Ralph's comments, however, regarding low-level rad waste and certainty.

Ralph had brought up several examples concerning Class Bravo and Charlie rad waste. Also with Class Alpha rad waste, I suspect that most of the major nuclear fleet operators do have some sort of a contract in place with the Utah facility, thus guaranteeing volume as well as escalation factors and I would highly encourage you all to have some talks with us as an industry. Certainly, some of this is confidential and proprietary, but I'm sure that we could provide a range that would give you some guidance so that we're not dealing with some unknown quantity.

There is a lot of certainty out there with low-level rad waste and certainly with the Texas Compact or the Texas site, I think that that certainty will only increase.

MR. PITTIGLIO: Yes, I agree with you and I will tell you that when we look at the site-specific cost estimates that come in within five years, that's an opportunity to where we do look to see if there's any formulas. Obviously, if you're 20 years from license expiration, the formula, the generic formula is going to apply. Who knows what's going to happen within the next 20 years. And in reality, that's why the regulation has set up the 50.75(c) requirement to come in at or around five years so we can see where we are with the site specific. And at that time I would hope that the site specific would identify specific contracts that they have in place as a basis for how they came up with the low-level waste number.

FACILITATOR ANDERSON: Next question is also at NRC headquarters.

MS. BALLENGER: Josie Ballenger from the Government Accountability Office. I want to go back to page 8, your bullet on management and storage of spent nuclear fuel and greater than Class C waste. I'm wondering if you can expand on that. Specifically, are those costs supposed to be part of decommissioning costs or are they supposed to be handled separately according to the regs? If that's not the case, is that something NRC has seen through real life examples of plants that have decommissioned or submitted their site-specific cost estimates?

MR. PITTIGLIO: Let me just say and I'll have Steve comment also. Those are items that we've identified that may be taken into consideration if the formula is changed and we go through the process of changing the regulation. We recognize some of these were not covered at that time. We raised the issue because it's come more and more of a concern regarding if there will be a large volume of waste stored at the plant at the time it shuts down.

Are any of those -- you know, if you ask me today do I know whether they'll be factored in or not at this stage, I would say we're just simply looking at the information that we have available and trying to assess it.

I don't know if you have any --

MR. SHORT: I guess the simple answer to the question is that currently spent fuel management costs are not part of the decommissioning fund. And so I don't know if that was the answer, specific answer to that question.

FACILITATOR ANDERSON: Does that answer the question?

MS. BALLENGER: I guess the key issue is, with the lack of a geological repository, has that changed the cost that the licensees are incurring for the storage of the spent nuclear fuel? And if that wasn't originally envisioned to be a decom. cost, but effectively it has become one or it is likely to become one, is that what you're trying to get at here?

MR. PITTIGLIO: Well --

MS. BALLENGER: What has been the recent experience of the licensees that have -- that are undergoing decommissioning and are in SAFSTOR, perhaps because of this issue?

MR. PITTIGLIO: Recognize that the spent fuel issue at the time of the formula wasn't an issue. It was assumed DOE would take possession of the fuel. I think there's probably what, 104 law suits against DOE right now to try to recover spent fuel costs. So -- but we recognize it is a big dollar number. As I said, when we looked at site-specific costs for the storage of the fuel, we see -- although it's not part of the radiological decommissioning, we're seeing numbers in the tune of a couple hundred million dollars in costs over the SAFSTOR period which includes the construction of the -- in most cases of a dry cask storage facility, the supporting canisters, and there's a big cost associated with security and maintaining that fuel. We've looked at annual costs, even after the plant has been cleaned up and removed. There's still a high cost for spent fuel storage annually while it's sitting there.

So whether or not we're going to include that in the formula, I really don't know, but it's a consideration based on where we are today and the fact that DOE doesn't look like it has a near-term fix related to the spent fuel.

I don't know whether that answers your questions, but that's where we are.

Steve, do you want to make a --

MR. SHORT: Yes. I will just make a quick comment. Even though spent fuel management costs are not part of the decommissioning fund, utilities are required to retain a decommissioning fund for those part 72 licenses or for the spent fuel dry storage facility under a separate regulation. Let's not presume that there isn't funding there to deal with that and that funding, if you look at those estimates that utilities provide, include an estimate associated with shipping that fuel off-site.

MR. PITTIGLIO: Another part of it is the regulation and 50.54(bb) says that at five years, not at or around, but at five years, prior to license termination the licensee is required to submit -- and Susan, if I misquote, please step in -- a preliminary spent fuel management program for Commission preliminary approval.

So when we typically reviewed a site-specific cost estimate, we're also looking at the spent fuel management plan or program. And that's where we've gotten some numbers in the $200 million range that we've looked at that are significant as far as the storage and disposal of fuel.

Again, those numbers are based on an assumption that DOE is going to take the fuel 30 or 40 years from now which may or may not even be the case at that time.

MR. ANDERSON: Ralph Anderson with NEI. With all due respect, I'd suggest that the expertise that the NRC should have in the room right now to address these issues is not present. And I think there's a lot of misstatements being made.

As you mentioned, the Courts are deciding right now who is liable for the long-term storage costs. The Commission itself has been looking at policy issues associated with long-term storage well beyond the 30 or 40 years that you're referring to.

There's a presidential commission looking at a larger picture. I would suggest that if you're thinking of doing something in the next 12 to 18 months, you're not going to have the answers to any of those questions and to suggest that somehow you would redefine that as part of a decommissioning cost, I think, extends well beyond where the Courts and the law itself are right now.

So I just offer that that whole area isn't really ripe for consideration either in this kind of workshop or even in the guidance documents that you're looking at or even a rulemaking as far as that goes.

MR. PITTIGLIO: We agree and we appreciate your comments.

Susan, did you want to say something?

MS. UTTAL: Susan Uttal from the Office of the General Counsel, NRC. There are no plans at this point to amend 50.54(bb) to make the fuel management costs part of decommissioning.

MR. BANNANO: Jerry Bannano, NEI. I just had a question about the remediation discussion that we had a little while ago. I've been kind of thinking about one of the comments. I just want to make sure I understood.

Is there a suggestion that you would be

considering clean up costs that are below the NRC dose limits? I thought that's what I heard, but that doesn't seem right to me.

MR. PITTIGLIO: No, you did hear that and the reason we made that comment, it really came out from I guess when we looked at, was it Maine Yankee? Yes. That, you know, the state wound up even though we had 25 millirem ALARA, the clean up actually went to 15 and 4, I believe. I think, as I remember, and it was quite a few years ago, that had an impact of $50 or $60 million that the licensee claimed, due to the fact that they cleaned up to a more stringent criterion than NRC. So we're aware of it. But it's certainly not 25 millirem ALARA is the standard that we're cleaning up to.

FACILITATOR ANDERSON: I know that there are other questions and comments here at NRC headquarters. Let me check in with those joining us by phone. Are there any questions or comments by anybody on the phone?

(No response.)

MR. KRAUSE: This is Dave Krause with Duff & Phelps Investment Management Company. Some in the room are aware of the fact that another federal agency, the Internal Revenue Service, has concluded that the spent fuel costs should be included in nuclear decommissioning funds and have recently come out with regulations that said that for costs, called qualified funds, that that spent fuel cost should be included in the decommissioning costs that go into the termination of contributions to qualified funds. So there seems to be an inconsistency between two federal agencies. One is sort of ignoring them and another federal agency that definitely feels that they're important.

MR. PITTIGLIO: We just don't have an answer to that. We appreciate your comment, but we don't have an answer at this time.

MS. UTTAL: Susan Uttal, OGC. The IRS has different concerns than we have. I'm not aware that they have any nuclear experts on staff, but it's interesting information nonetheless.

FACILITATOR ANDERSON: The next question is also at NRC headquarters.

MS. GOODMAN: Lynn Goodman, Detroit Edison. I believe the IRS regulation allows for it to be a qualified fund. Does not require fuel management as being part of decommissioning. It just allows it.

FACILITATOR ANDERSON: Are there any other questions or comments here at NRC headquarters? How about on the telephone? Does anybody on the phone have any questions or comments for this topic? Okay, great.

Larry, thank you very much. We'll move on to the next presentation.

MR. PITTIGLIO: All right, we will move into the discussion on NUREG-1307. Hopefully, this will be less controversial. I had set up the other one figuring that would be the least controversial, but you never know.

Again, Steve Short has been with me for many, many years, working for us on contract and is really the key player of PNNL in developing the NUREG. To start with, we're going to talk a little bit -- first slide.

We've recently issued NUREG-1307, Revision 14. That is the current version that will be used for the decommissioning funding status reports that the licensees are required to submit by March 31st of this year. Above, I've identified some of the initial assumptions and some concerns that we've had and we talked a little bit about it in the other presentation about disposal rates may be significantly increased.

In 1998, we made an assumption in the NUREG that dealt with a waste vendor and 100 percent disposal, so we have a vendor and a direct disposal option. We're going to talk about that a little later, because that was an assumption that was made in 1998 and in reality, it's something that as we've done a lot of work and a lot of studies, are going to make a change in that.

So let's go on to the next slide.

A couple of key points, the low-level waste generated during operations is -- we assumed it will be disposed of with operating funds. Plants that have no disposal capacity available, we recognize, may have to store it and that may be an issue for us. And what happens if disposal costs are not available at the time the plant comes off-line? That's certainly something that we're always concerned about.

Next slide.

Again, at this stage, the disposal costs for waste that are stored on site during operations are not considered part of our disposal costs. If you don't have a disposal site available, then it's going to be an issue at the time the plant comes down because we just don't have the facilities to dispose of it at this time.

And a key point that we applied in this revision to NUREG and which raises a lot of concern is this vendor option that we initiated in 1998 which assumed we had two options. One was a direct disposal and the other was 100 percent use of a vendor.

Next slide.

Now, where are we going with the issue on the vendor direct ratio and this is what we looked at very closely. Actually, let me go back. We started looking at some of the basic assumptions to the NUREG 1307. We currently have revision 14 out. I took over the project management control of it back in Revision 11 at the last minute, and then worked on Revision 12 which was done four years ago. And at that time again, when Revision 12 came out, there were many statements in it concerning if new disposal capacity became available, costs could go up significantly. We had a lot of concerns about some of the basic assumptions. and over the last four years, we've had an opportunity to look at many site-specific cost estimates that have come in, as well as those reactors that had completed decommissioning.

And one of the things that came out of it was and by the way, there is a chart and it's ML number I think I mentioned earlier is ML 11039011. That chart is available in ADAMS, publicly available. And what it identifies is approximately over 30 site-specific cost estimates that we've reviewed over a period of years that have come in and we've gone back and looked at the vendor direct disposal ratios. And as a result of that, we've decided that we're going to change the ratio from 100 percent to a ratio of 70/30 because in all of those cases that we looked at, we were not able to support any cases, I don't believe, that had 100 percent direct vendor disposal.

Now what is that potential impact? It has an impact of looking at a run that we made if we had done it today of an increase in the formula amount of typically $50 to $70 million. So that's over and above costs that are associated with increases in energy, labor or burial. But it's the assumption that we've looked at very closely and which again, it was based on information that was submitted and on the docket that just doesn't support 100 percent vendor use.

The other thing we're trying to do is align a formula with the site-specific cost estimates and we're looking at waste costs also. Again, I mentioned and I think NEI mentioned it, but we received some notification just this morning that Texas is having a meeting on March 10th to look at their rate structure. If we get some new rates, it may have also another significant impact on the cost of low-level waste and on the next version of the NUREG.

Next slide, please.

Again, we're going to look at -- any time we get new disposal capacity, we'll use those numbers. Today, we're using Revision 14. Steve, if I'm not wrong, we used a lot of the Barnwell rates and simply escalated them up. We don't have a better point, a better number. So had to use that as a reasonable assumption. Once we get real numbers, we're going to use them and it will probably, I doubt that any new rates are going to be lower than the ones that we currently use. But I could be surprised.

So we wanted to give you a heads up of where we're going with this thing.

Next slide.

An example of something that occurred that I thought I would show was what happened with SONGS. It was submitted in 2009. The formula amount was $344 million at that time. The site-specific cost estimate was I think $394 million. The actual expenditures to date at that time as of March 31st was $385 million. And they estimated to balance the complete decommissioning cost at $8.8 million. One year later, March 31, 2010, the formula amount reflected a $337 million cost. The site-specific estimate had been raised to $490 million. The actual expenses to that date, one year later, was $461.8 million. And they estimated the balance to complete decommissioning was $28.6 million. So that number jumped from $385 million to about $485 million. It went up $100 million and that was really due to predominantly due to disposal costs.

We put that slide in just to somewhat demonstrate the concerns and issues that we see with disposal costs. I think that -- next slide. Again, I just summarized what I just said, that $86.4 million increase in one year, actual decommissioning costs exceeded the formula by $153 million or 45 percent.

So these are factors that weigh heavily upon us and why one, we're looking at the formula, and why two, why we're looking at some of the supporting assumptions in the NUREG that need to be adjusted.

And with that, I think -- last slide. Again, I just put the formula number up and that's not any surprise. And we're open for any questions that you might have. The hard questions go to Steve this time.

FACILITATOR ANDERSON: Any questions here at NRC headquarters Larry?

MR. LEVIN: Thanks. Adam Levin, Exelon Generation. Interesting presentation. Thank you. I appreciate it.

My observation with respect to the split of vendor costs versus direct burial costs, I think there's a paradigm shift developing in the approach towards decommissioning which it started with our project at Zion station and I don't want to say our project because it is now, the license is under Zion Solutions there.

Where we've or they have been able to conclude that direct disposal of waste was actually less expensive than trying to process it on site if you will, rather than trying to determine what $300,000 cubic feet of waste was radioactive, they just made the assumption that if there's a building that had radioactive material in it in any case that rather than trying to sort it out, you would just take that whole building down.

So there's some opportunities here that I think are a little different than just simply stepping back and saying here's the right mix of vendor costs to direct disposal costs because in all cases, the decommissioning approaches are going to be what's the least cost method for disposing of waste and whether it's a vendor that you go through or whether you directly dispose of it, what you're always looking for is that least cost.

So I think it would be good to understand not only the fact that there might have been a split in site-specific cost estimates, but go back and look at the actual decommissions that have been done to date and the decisions with respect to the business decisions with respect to whether we're going to a vendor, whether we're going to dispose of it directly. Because I think those are going to have a significant impact on your approach also.

MR. PITTIGLIO: I appreciate your comment. And in reality, that's basically what we did. We went back and looked at the data that we have and that's what was the realization that we were -- the 100 percent was just not a reflective number. It was something that was done in 1998. We will make a change in it as we get more data available. We may change it again, up or down.

There is certainly a large uncertainty with low-level waste. I have to agree with you 100 percent. What we have to recognize though is this is entirely different than site-specific. When you come in within five years, you have a contract and have a definite mechanism for disposing of waste, that's a different issue. What we're trying to do is project 20, 30, or 40 years out using the formula as what is a reasonable estimate to decommission a plant.

MR. SHORT: This is Steve Short, PNNL. Sorry, I keep forgetting to introduce myself.

Yes, we recognize that change is going on in the low-level waste management and disposal business. We have been talking with Energy Solutions. We communicate with them -- and in fact, their quoted prices are what we used in our NUREG-1307, this issue.

I'm also kind of recognizing and seeing -- there's been an evolution between Maine Yankee, Haddam Neck, Trojan, Rancho Seco. Each one of those approached their low-level waste management differently. Trojan sent everything to Hanford Site, the US Ecology site. Got a great deal on the disposal rates and consequently you see Trojan has got a fairly low overall decommissioning cost.

At the opposite end of the extreme is Haddam Neck. It sent everything to a waste vendor and close to 10 million cubic feet, even the stuff that was not radiological. And so you see -- I see this wide spread between different approaches and we just need to try and take that into account and make sure we're doing something reasonable.

But we are talking with, we do communicate with Energy Solutions. We recognize they are the provider for Class A, low-level waste in this country and we can't ignore that.

MR. PITTIGLIO: Let me say one other thing. I want to thank Ralph Anderson. Ralph helped us out significantly although we had trouble getting data. But both Steve and I asked Ralph to help us out for the recent revision of NUREG-1307, to be able to get actual cost numbers. And we had a difficult time and we would not have had as much information if it hadn't been for NEI support on that. We do appreciate that help.

We are making every attempt we can to use current information when we update this NUREG.

MR. CAPIK: Good morning, Nick Capik with ABZ. Can you explain the 70/30 split that we see on slide 5 and how it compares to the 85 percent for vendors used in NUREG-1307?

MR. PITTIGLIO: The 70/30 percent is the proposed vendor under the vendor disposal ratio that we will use where 70 percent it will be vendor disposed, and 30 percent will be direct disposal.

Under the current chart, we have two cases. We have direct disposal and we have vendor disposal which is 100 percent ship to a vendor.

When we looked at the chart that you saw or that you may look at, we found out that typically there were no cases or only maybe one case where all of the waste went directly to a vendor, that the waste was divided between direct disposal and to a vendor. When we looked at the percentages that are shown in the chart, we picked a conservative number. And when I say conservative number, my first thought was to use 60/40, but that would have bumped the number up higher as far as the amount of dollar increases. So that was the basis for the 70/30 selection and the impact that we're projecting.

MR. CAPIK: Just a follow up. The 85 percent that's shown in NUREG-1307, Rev. 14, does it have a different basis than the basis for the 70/30 that's proposed for 15?

MR. PITTIGLIO: NUREG-1307, Revision 14, did not use 85 percent. It used either 100 percent for direct. It did not use any percentages on the breakdown. We were looking at several options at the time we were going to issue the NUREG and at that stage decided we needed to have additional time to look at the data and we knew that the workshop was coming up, so we wanted to take the opportunity to discuss it.

At that time, we looked at 85/15. We looked at 60/40. We looked at a whole bunch of different numbers and decided that although it was a concern that we would take the opportunity to accumulate a little more data and postpone the decision which would have had to have been made in October, to publish the thing in November of this year.

MR. SHORT: Let me just refine Larry's statement just a little bit. B and C waste always goes directly to disposal is our assumption. So that doesn't go to vendors.

MR. CAPIK: Not to belabor this, but the table that's in the summary on page -- Table 2.1 of Rev. 14 says that 85 percent of the total volume is disposition using waste vendors and the Clive, Utah disposal facility and that 15 percent direct disposal at one of the two full-service disposal facilities.

Is the 15 percent the B and C waste?

MR. PITTIGLIO: Yes.

MR. SHORT: Yes, this is Steve Short. That's correct.

MR. PITTIGLIO: But now what we're talking about is changing the percentage of the total waste, the A waste. That's what we wanted to clarify. When we say 70/30, we're talking about a breakout of the total volume.

MR. SHORT: Let me clarify that a little bit. There were a couple of Class A category waste that we did send direct to disposal because we had determined way back when we set this up that we didn't think that would go -- that those would go to the vendors. So that is also included in that 15 percent.

I can't remember right offhand which piece of that is, but if you want to know, we can look that up and let you know.

FACILITATOR ANDERSON: Does anyone on the telephone have any questions or comments for Larry or Steve on this topic?

(No response.)

MR. LEVIN: Adam Levin, Exelon Generation. Larry, are you intending to chair this for public comment at some point along the road since this is a fairly significant change in approach?

MR. PITTIGLIO: Our intent was to simply inform you of the direction that we're going. We did the same thing when we made the 100 percent assumption and it's part of the NUREG. It was an assumption that we initially made 12 years ago and we felt that the assumption is outdated, but rather than simply put it in Revision 14, we wanted to take the opportunity to tell you where we're going with Revision 15. And will look again to make sure that with the 70/30, it might be 65/35. We're going to look at the numbers one more time and that's exactly why we're here today, just to let you know heads up, we are going to make that change. Costs will go up.

We also recognize costs may go up if the Texas numbers come out. So we don't want this to be a surprise to anybody and we wanted to give plenty of opportunity to be aware that you may need to contribute some additional funds.

FACILITATOR ANDERSON: Are there any other questions or comments here at NRC headquarters?

(No response.)

FACILITATOR ANDERSON: And I'll check in one more time with those on the phone. Does anybody on the telephone have a question or comment?

(No response.)

FACILITATOR ANDERSON: Great. Thank you, Larry. Thanks, Steve.

MR. PITTIGLIO: Thank you, all.

(Applause.)

FACILITATOR ANDERSON: This is the point on the agenda where we separate into two breakout sessions. Breakout Session 1 will remain here in the Commissioners Hearing Room at NRC headquarters. Those that want to attend presentations in Breakout Session 2 will have to transition to another part of the building. Now this is the part of the logistics that requires NRC staff to escort those that are headed there.

So what I'll do at this time, everybody that's here at NRC headquarters that wants to participate in the presentations and breakout Session 2, Anneliese, could you please raise your hand? Look for Anneliese Simmons who is standing and Bret Leslie who will be facilitating that second session. I'd like for all of those people to please join Bret and Anneliese on my right side of the auditorium, in a lot of cases your left side of the auditorium. They will escort you to that second breakout session.

Also, as a reminder for everybody participating in either of these two breakout sessions, we will break for lunch immediately upon completion of your individual breakout sessions and we will reconvene here in this auditorium at 1:30.

Thank you.

(Off the record.)

FACILITATOR ANDERSON: Let me welcome back everybody to the afternoon session of our decommissioning funding workshop. Again my name is Brian Anderson, I am the facilitator for this meeting and before we get started with the afternoon presentations I'd like to just briefly remind everybody of ground rules that we talked about earlier this morning.

Of course there are paper copies of presentation materials available on the table in front of me or on the table by the door, for those that want them. Anybody that's participating via webinar and dial-in bridge the presentation slides will be broadcast on your webinar screen. In terms of dialogue in the room I appreciate everybody's support and assistance with maintaining the ground rules that we talked about this morning.

I'd like to ask everybody to please continue to be concise in your presentations, your comments, and your questions. Again, I appreciate your support with doing that. In order to ensure that folks that are joining us on the phone can clearly hear what's being discussed and to help with maintaining a clear transcript I'd like to ask that any comments, questions, any speaking that's done please be done into a microphone.

Either myself of Bret Leslie will will get a microphone to you, please if you're here in the audience just raise your hand if you'd like to make a comment or ask a question and presenters, please just continue to speak in to the microphone. Would of course appreciate your support in continuing to have just one person speak at a time and if there continue to be any differing viewpoints of opinions on topics that we discuss today please continue to treat other with respect and courtesy. And with that, we'll go ahead and start with the afternoon presentation. Tom?

MR FREDRICHS: Thank you, Brian. Well, welcome back from lunch everybody, I'm heartened to see that the morning was good enough to bring almost everybody back, and I'd like to thank you all for attending our workshop. We're trying to get a wide variety of views. I'd like to thank again our distinguished speakers for helping us make this a success and also everyone whose attended here will help us make this a success by giving us your comments you know, during the workshop and also as you know the comment period for these topics will extend for the next month, so certainly if you can think of anything more that you would like to say, please contact us.

I'd like to say that my presentation isn't to advocate for one position or another at this point in our program, but my goal is here, I want to present some facts, some data, some history, so that you know, we can get a historical perspective of where we're coming from but more importantly to stimulate some discussion, to try to draw out comments to help inform us.

As you know that, we're going to be developing a Commission paper for the Commission to decide on a net present value issue and your comments are going to help us develop those positions so please you know, share your thoughts with us. We're anxious to hear them. Next slide, please.

This is a roadmap for my presentation. I thought I'd start out on some big picture thoughts on the parent company guarantee before we got into the details of it. We're going to review the regulations to give a basis for the rest of the discussion. There are three license transfer cases that NEI has commented on, and, in which we took a net present value approach.

I want to talk about those, and after that there's actually a fairly long history of comments and responses on this issue and I'll just summarize them and go over them a little bit. Then I'll talk about costs and risk and certainly everybody should help me out on those.

And, the conditions to achieve equivalency, this will become clear after I talk about the regulations but one way that a present value parent company guarantee could be accepted would be after an evaluation on the staff's part to find that it was equivalent to other methods. And finally, I'll summarize it. Please? Okay.

Well, just so everybody understands that the parent company guarantee is an agreement, it's between a parent company and its subsidiary. In my view this should be a win-win approach. There are lot of, there are advantages for the licensee, there are advantages for the public, and I list them up there.

You know, it's a low cost method from the licensee's point of view, it's under your control, there's no third party involved. It's unlikely that you're going to have to actually perform under it. On the public's side, if there is a parent guarantee in place it adds to the licensee's funds for assurance.

Because, enhanced confidence and a lower risk of shortfall, so I think this is a win-win and it's a useful method that we have. Next slide. And here's some benefits and risks, it's a little different look at it. But one of the perhaps the biggest benefit, in fact, the reason that licensees and stakeholders came forward asking to have this method is because there are no financing costs, you can issue them quickly.

They're very good for temporary needs, and I have a case example that I'll talk about later where the parent company guarantee was handy during the interim when a company was trying to get license renewal. On the other hand, there are of course risks. They are more vulnerable in bank bankruptcy by virtue of the fact that there are no funds outside the company.

There's a common mode risk, and by that I mean that financial stress on the licensee can be translated into financial stress for the parent so there's that concern. These are unsecured contracts, there's no, there is no security, there are no funds set aside.

And on this last one you see it's kind of a pro and a con because while it can be used to adjust the timing of deposits in order to smooth out cash flows for a company, at the same time it's an incentive to avoid a deposit altogether because you can write a guarantee rather than putting money in your fund, and it can lead to delays in decommissioning if money is needed and the parent company isn't able to produce it.

And that third question there, do the indirect costs negate the benefits? And I think that's kind of the broad view of the comments we've had on the present value issue is that while licensees see there are advantages to using this guarantee, they believe that there are indirect costs that are burdensome enough to counteract them to the point where they would not want to use a guarantee.

Next slide, please. I've had several of these salted throughout the presentation. We can answer them later, but these are some of the questions that I'd like specifically comments on as I develop the SECY paper for the Commission. Are there additional benefits or risks to using the parent company guarantee we haven't identified? Next slide.

This is, or will be a quick overview of the regulations. Well, while they're dealing with that I'll just talk to it. Oh, there it is. The history of the parent company guarantee actually originated with the EPA. Now, the NRC when we first adopted these used the methods that EPA had, very closely. We've you know, gone on divergent evolution since then, perhaps, but that's how it started.

And, interestingly enough, 30 years ago, the EPA faced the same question, where hazardous waste operators asked as a question of equity, why shouldn't they be able to build up their guarantee over time like the trust fund people were able to do. And the EPA didn't allow it at that time, their response was that there are a variety of methods and their operators, or in our case, our licensees, are free to choose the methods that suit them best.

And, EPA has held to that position ever since. In 1988, we, the NRC, finally enacted our own rules after a period of time and interestingly enough the parent company guarantee was allowed for everybody except the electric utility reactor licensees. What they had instead was the external sinking fund which required annual deposits but the thought was that because you could build up the fund over time, you didn't need the advantage of a low cost parent company guarantee.

And, the next major Rule I mention is 1998, where the power reactors were finally authorized to use the parent company guarantee. It was in response to deregulation, we found this to be a low cost and flexible method, and at the same time in that rulemaking, deposits were no longer required in the trust funds. Next slide, please.

Okay, this is just a reiteration of the requirements which I think everybody in the room is pretty well familiar with. This is financial test 2, there's also a financial test 1, which I'm not going to talk about because no one uses it. The two points of, that are at issue really are the first two, the tangible net worth and the assets.

In both cases, it has to be six times the face amount, and I'll also mention that the tangible net worth excludes the book value of the nuclear units. I put up there a little note that there's a new Rule that's been approved, it hasn't been issued yet but it would allow intangible net worth to be included in the net worth requirement of six times.

Essentially that means you can count your company good will and will make the net worth requirement perhaps more easy to attain. Next slide, please. Well, computers. I guess the weight of the argument makes it slow to move from one to the next.

This is a regulatory analysis of why the parent company guarantee needs to be full value, and we start with the all these regulations are in 10 CFR 50.75. The first one that applies is that the amount of financial assurance may be more but may not be--but must not be less than a specification in paragraph c, and that's the formula that Larry Pittiglio talked about earlier this morning.

Now in 50.75(b)(3) the amount that you, that has to be covered using one of our methods in paragraph e. You go to paragraph e, we find out that the parent company guarantee regulation doesn't have any provision for discounting, or it doesn't allow you to discount. It has to be at least as much as the cost estimate or the portion that you're covering, so it needs to be face value.

But having said that, if we go to the next slide, we can still ask the question, well, since it asks, how could we discount this if that's what we were going to do. There's always the exemption process. In order to grant an exemption among other things there have to be special circumstances. We also have an interesting regulation in, back in 50.75(e)(1)(vi), where it allows other mechanisms.

And in particular it allows NRC to accept another mechanism if we evaluate the special circumstances of the submittal, and we find that the proposal is equivalent to the other methods in numbers one through five. Now, note that there's a special circumstances overlap between the exemption and these other mechanisms.

I'm suggesting that we could use either one of these methods to arrive at the answer, and of course there's also rulemaking. We could put in a Rule that specifically states that parent guarantee could be a discounted value. I'll note that the other, one of the perhaps largest differences between 50.75(e), the other mechanisms and the exemption, is that with other mechanisms we have to make a finding that there's equivalency, have to have something above the simple exemption. Next slide, please.

And here I have a couple of questions that I'm soliciting comments on. What might constitute a special circumstance that would be considered, either for or against, and what factors should we consider in determining whether or not this other method is equivalent to the methods already in the regulations? Next slide, please.

Most would like to solicit comments on public participation. As we heard with the gentleman from New York this morning he feels greater transparency in the process would be an improvement and I'll point out that in 2009, the NRC engaged in a greater public participation regarding financial assurance.

In the summer of 2009 for example, we had a public meeting to discuss comments on DG-1229 which was the, one of the documents that Aaron Szabo this morning talked about. He was taking comments on revision 1. Back in summer of 2009 we had the original one and we had about 40 people in attendance and about 60 people on webinar to discuss that, in August.

In the summer of 2009, it says, we reported a lot of information about shortfalls on our website. In February of 2010 the Commission itself held a public meeting and some of the people who are here today gave statements to the Commission at the time, Adam Levin from Exelon for example, was one, and Paul Bailey from ICF consulting. So I think we've moved in the direction of more transparency and more participation but the question for comment is should public participation be provided when we evaluate a discounted PCG, assuming of course we go that route.

And if so, what kind of methods would we use, and there are three suggestions up there. Next slide. Now we have a regulatory basis for, I think will help us understand what happened in the license transfer cases and why the staff has moved away from that practice. The reason I'm bringing them up is because they were offered as a reason in comments sent in by NEI why we should approve the discounted parent company guarantee.

And, when you go back and look at the safety evaluations we did for those cases we find out that the basis was 50.75(e)(1)(iii)(B), which is the parent company guarantee provision and that's an incorrect application of that regulation. As we've said there's no discounting method involved in there.

If we're going to do it we need one of these other methods that I talked about, the exemption, other mechanisms or rulemaking. Go to the next slide. What we can say is that using a discounted parent company guarantee is inconsistent with the large majority of P.C.G.s, parts 30, 40, and 70, research and test reactors, other power reactors, and if we turn the page, I took a quote out of the materials guidance that we have, and recognizing that materials is different from reactors but I think it, but also remembering that for ten years power reactors couldn't use parent company guarantees and this was the staff understanding during that period of time.

And it states explicitly, no credit is taken for earnings on any assurance mechanisms such as a parent company guarantee that does not set aside actual funds. So, in our reactor guidance it's not addressed one way or the other. If we go to the next slide, please.

And, I mention--this is an actual case, one of the transfer cases where a discounted amount was used. I took some numbers out of the application so we could see the magnitude of what we're talking about in this case. In particular the guarantee was about $55,000,000. You sum those up and that's the $320,000,000 is what the licensee used to project the earnings that their trust fund would accumulate and to determine whether or not they would meet the funding requirement.

At that particular time it was $376, 000,000 is how much they needed. So. But it's important to realize that only $266,000,000 was put in the trust fund, and if we turn the slide, we can compare the projections that Nine Mile Point made in 2001 to the actual fund balances at the end of the year as reported in the fund status report.

And what we find is what you might expect.

The actual earnings on a fund of $266,000,000 doesn't add up to what you would make if it was really $320,000,000, and perhaps more importantly in this case, in 2008, they reported a $45,000,000 dollar shortfall.

And this was after they had received license renewal and their earnings credit period on the money they did have included an extra 20 years. And if we go to the next slide, please. So, the question here that I'm soliciting comments on, well, should we, should the NRC continue to approve these discounted guarantees like we did in license transfer cases, and what factors would argue either for or against treatment of earnings, credit for PCGs different from what we use for all other licensees. Next slide, please.

Going to switch to talking about, you know, the comments and responses. I think, you know, now we understand the regulations that we have a feel for the license transfer cases, that's sort of the background for understanding the comments that NEI sent in, and also our responses.

The first two of those up there go back to the, well those are actually both on assets and it appears that there was a belief in the industry that a parent company guarantee which requires possession of six times the face amount in assets also required you to restrict them, to set them aside in some fashion, to restrict them from use as collateral for other obligations.

And that's just simply not the case, and we had this discussion with some licensees and I, it's my opinion that they truly believe that there were restrictions and so this may have been news to them. The other comments were that there are significant indirect costs, there are no financing costs because it's just the agreement between the parent company and the subsidiary. But these three items up here were advanced as indirect costs that could be very burdensome to a licensee or its parent company.

Now there are a number of counterexamples showing that in actual cases, this didn't happen. Progress Energy, which I'll talk about at some length, Florida Power and Light, First Energy. At Exelon, I put a question mark there because I haven't seen their latest financials so I don't know, but they have recent experience so if they have felt some of these burdens I think they'll be able to tell us about them.

Next slide, please. And these are some other comments that the tangible net worth requirement itself is too burdensome. Our response is there are other methods you can use that have no net worth requirement. And, finally, that it's not consistent with the generally accepted accounting principles.

And our response is that the accounting principles don't ensure adequate funds. And, next slide, please. All right, this is the indirect cost. Are there actual financial consequences that are burdensome due to using parent company guarantee? And I have three examples up there. I put down LOCs, letters of credit, for those who aren't familiar with it.

And in the Progress Energy case, they had three units, Robinson 2, Brunswick 1 and 2, which were nearing license renewal time but it was too early for them to put in their application, but due to the market downturn of 2003 they were short on their funds. And, Progress Energy in conjunction with its biannual reports, sent in three parent company guarantees, one for each of those units, in a total that's up there.

And by the way, they are the company that has made the largest use of parent guarantees. If you read the annual reports you'll find out that Progress stated that they had, that there was no effect on the liquidity of short term borrowing costs which would be a counterexample to the concerns.

I will say however that Progress Energy actually did have a ratings downgrade that year. You might say, a-ha, that proves it. Those parent company guarantees. Or you might read the annual report, and I'll just mention they went, and you'll find out the reason they were downgraded one notch by, I'll mention Moody's, because they were kind enough to attend today, but the others did the same.

Because they had recently acquired Progress Florida, and they were slow on repaying the, on their payment schedule to pay that off. But I'll also mention the FPL had an A credit rating, you'll notice that in their case they have actually a huge amount of parent guarantees for all sorts of things and the NRC portion of it is very small. Very similar with First Energy.

And, I'll mention a little more about Progress Energy because they did what we would hope a licensee would do. They realized they had a shortfall, they took action to fix it, they used a parent company guarantee. The NRC didn't have to notify them that they were short. We didn't have to get a plan from them on how they would fix it.

They were interim measures, they carried them for about three years. And then terminated them. And I would hold out the Progress Energy example as a model for the industry in proactive management of your financial assurance to avoid unnecessary shortfalls. Next slide, please.

Oh, there it is. The other thing is that when I talk to people about parent company guarantees, there's, they always say well it must be a liability somewhere and, actually, it's not recorded as liability, at least in these examples. I see Reijji is already writing, maybe you do it differently at Exelon, I'd be interested to hear.

But, this is what you get by reading their annual reports or the 10-Ks. The other thing is that in general nobody really expects that these guarantees will ever have to be used. We expect the licensee's financial operations will be sufficient to pay for decommissioning. However, as I note later on, financial assurance is a second line of defense.

In case they don't make enough money, we want to be assured that the decommissioning will be completed in a timely and safe manner. Okay, next slide, please. Well, the question is--now, the question is, is tangible net worth a burden? And NEI provided a new reactor example, and in this case the new reactor would assure the entire amount of decommissioning using a parent company guarantee which is allowable under our regulations.

And the conditions that are up there, the bottom line is that $171,000,000 face amount would be the discounted parent guarantee amount for the $405,000,000. Next slide, please. What I would suggest is that if the goal is to reduce the net worth requirement, then there are alternatives that are more effective than the discounted guarantee.

Up there is six times the amount for the full value or discounted. The other methods, there are no net worth requirements. They are what they are and the NRC believes that licensees have the flexibility to choose the method that's best suited for them. Next slide, please.

The comments that I would like to solicit on this issue, you know, how much weight should be given to minimizing the parent company's net worth when we evaluate a request? And are there an examples where a reactor licensee reduced--actually experienced reduced liquidity or credit stress or credit down rating due to a full value parent company guarantee that count have been avoided if only they'd had a discounted guarantee.

Next slide, please. There's the, I guess the observation that our methods are not consistent with GAAP. I think our first response of that is that they have different goals. I mean, GAAP is there to give information on cash flows.

Financial assurance is there to protect public health and safety, and given that there's different goals we would have different ways of achieving them. I did take a quote out of a GAO report that I think is pretty much on point. The accounting standard will not ensure adequate accumulation of funding, and the reason why it's only a reporting requirement, there's no funding required by the accounting standards. Next slide, please.

And, some more comments on that. These are Federal Register excerpts that NRC has put out in our decommissioning rules form time to time and, you know, capital investment analysis could result in levels that are not adequate which is what we saw to some extent in the Nine Mile Point example. And, as I mentioned before, financial assurance is a second line of defense.

Next slide, please. Nevertheless, we can ask the comment and we would like to hear answers, to what extent should the financial reporting requirements be used to evaluate these types of requests. Next slide. And other comments. What cost savings could be realized if we had a discounted PCG compared to full value. Are there some costs of using the full value PCG we haven't covered in this discussion?

Okay, next slide, please. This is a number of the risks. You know, if we went back to that first table I'm going to go through them in a little more detail. They suggest I guess the laundry list, and if we flip to the next slide, one of the risks in bankruptcy is the creditors will seize the parent's funds. They lack the protection of trusts or other third party surety methods, so there's a vulnerability there.

And they only get partial recovery in bankruptcy, and since the discounted parent guarantee has a lower amount than the full value, it follows that you would recover less. I'll also say that because they net worth amount is lower, that there's a lower safety margin. If we go to the next slide, I'll expand on that a little bit.

The reason why is the cost of decommissioning is the same, regardless of which financial assurance method you use, because the discounted PCG has a lower tangible net worth, you have a lower ratio of net worth to the cost of decommissioning. And as I mentioned, the lower face value leads to lower recovery in bankruptcy. Next slide, please.

In the comments that we solicit, well how much weight should we put on these vulnerabilities to bankruptcy when we consider the equivalency to other methods? Next slide, please. As I mentioned there's an incentive and in the 1998 rule where the parent company guarantee was extended to the power reactors, there was a discussion, a concern that the NRC mentioned then that the use of the guarantee could lead, could give an incentive to delay or cease payments into the trust fund.

And then we'll look at the 2009 experience where over 80% of the dollar value of the shortfalls was experienced by facilities that had ceased making payments into their trust funds. And the comment that we'd like to solicit on that is how much weight should we put on this incentive to delay or cease payments when we evaluate these types of requests.

The next slide, another solicited comment. I'm putting these all together. I'm wondering if these types of risks of automatic stay discharge or abandonment, you know, are they really much different between the two? And then the next slide we talk about what sort of--I'm calling this conditions to achieve equivalency, I should explain that I'm assuming that we're going forward under probably 50.75(e)(1)(vi), the other mechanisms.

And, to do that, we would have to find equivalency, so if we find that a discounted parent company guarantee is not equivalent to a full value guarantee or other methods then there may be conditions that we can put on the discounted guarantee in order to accept them as financial assurance. And some of the factors that we can consider, you know, the time horizon and security and those other factors, if we flip to the next slide I consider these a little more detail.

There's a question of how much of a discount are we getting? It varies over time, and this table is intended to show what those variations should be. The 20 years is a license renewal term, 40 years is the operating license term. 93 years is an operating license shutdown after 40 years, 53 years in safe store, which gives you 7 years left to meet the 60 year limit.

And as you can see, the present value is, gets to be lower and lower as we go along there. And, there's nothing in, if we go back to that new reactors example, where it was discounted 40 years, there's nothing in our rules to stop them from discounting it for 93 years and offering roughly a third of what they were offering before.

And the question, the comments are, well should we limit the discount period? Should, if a discounted guarantee is allowed, should it be allowed to be discounted over 93 years or whatever or should it be some more limited horizon? We can also ask the question that after permanent shutdown, should we simply require the full value regardless?

Next slide, please. I mention there's no funds or collateral, so--there, are we skipping one? Back one, maybe? Yes, that one, there it is. These are the conditions that we could conceivably put in place to use a discounted guarantee. Could be a cash reserve in escrow, a first lien collateral that's not encumbered by other liens. Payments in a trust fund while the PCG is in use. Next slide.

Could merchant plants be subject to additional conditions due to the lack for access to ratepayers? Next slide. Now there are other factors we should consider as we go through this. Okay, and finally, the summary. I believe that the guarantee can be a win-win method for licensees and for the public. We don't have a way of accepting a discounted parent guarantee without an evaluation.

There aren't any financing costs for the PCG, we haven't seen an indirect cost been demonstrated and we should consider conditions if we, if we do use a guarantee to make sure it's equivalent. So, the last slide is the end, and if there are any questions I'd be happy to respond.

FACILITATOR ANDERSON: Thank you, Tom. Does anybody here at NRC headquarters have any questions or comments for Tom? And just as a reminder, if you could please state your name and organization that you represent, that really helps us with our transcript. Thanks.

MR. HAYES: Hi, good afternoon, Tom. This is Reijji Hayes from Exelon Corporation. On page--it's page ten in this slide, but the slide where you speak to the guarantees outstanding for progress, FPL and First Energy, it's the table.

MR. FREDRICHS: Yes.

MR. HAYES: It's slide--sorry, I can't--slide 19, I think.

MR. FREDRICHS: Yes. Yes.

MR. HAYES: Right. So the middle column where it highlights the billion for Progress, the 9.6 for FPL, and the 3.8 for First Energy. Is the implication there that they hag significant amounts of parent guarantees outstanding and the rating agencies do not bat an eyelash at that? Is that what the implication of this table is?

MR. FREDRICHS: No. This is--well, these, this is the amount of the parent guarantees. I'm not implying what the rating agency may do. I am noting what actually was reported in the report. In the case of FPL, they had an A credit rating. I'm not speculating whether they would have gotten a grade higher if they wouldn't have had these number of guarantees but what I'm saying is that large numbers, large amounts of parent guarantees are consistent with, you know, solid credit and not being a risk of downgrade.

MR. HAYES: The reason I ask is because I can't speak to Progress and First Energy's guarantee portfolio but I am aware that FPL, a large portion, I think roughly $7,000,000,000 of their parent guarantees actually support debt that's already outstanding at subsidiaries, so it's already baked into their balance sheet and is in fact on balance sheets, so the rating agencies that they took that full 9.6 billion and counted it as debt would be double counting the lion's share of that.

So, I think it's, it may be worthwhile to carve open those guarantee portfolios and see what exactly supports debt already outstanding, because if a lot of these guarantees, particularly FPL, if they had $9,600,000,000 that was not supporting, that didn't already have debt on the balance sheet, I'm sure the rating agencies would have a stronger reaction to that number. So that's a simple point.

MR. FREDRICHS: Okay, well, I could point out in the report where they make the statements, but, but yes, especially if you, I mean, if you do dig into it and you find something, please let me know.

MR. LEVIN: Adam Levin, Exelon Generation. On, well it's on page four in our presentation, I'm not sure what slide number it is, begins why does the parent company guarantee need to be full value. The third bullet there, you have identified that 50.75(e)(1)(iii)(B) has no provision for discounting parent company guarantee. Are there regulations elsewhere in 50.75 that do preclude the use of a parent guarantee or is 50.75 just silent on the matter?

MR. FREDRICHS: I understand the question. 50.75 merely, all it says is that you can use a parent company guarantee as financial assurance. So-- but it doesn't say you can and it doesn't say you can't discount.

MR BONNANO: Thanks. Jerry Bonnano from NEI. I had a question along the same lines. It seems that when the license transfer cases were approved, you all used the parent guarantee provision in 50.75 as the basis for approving those, so you're changing, it's a change interpretation. Now the interpretation is that discounting a parent guarantee is precluded?

MR. FREDRICHS: I don't think it's a change in interpretation. I think that the earlier application was incorrect. If you look at the SER that's attached to it, it merely states that this is acceptable. There's no reason given as to why it is.

MR BONNANO: I guess what I'm suggesting is, since it was allowed and you didn't need an exemption before, that it is a changed interpretation, to require an exemption now, and that would need to be explained, the rationale for the change in position, and I would just direct you to the Honeywell case in the DC circuit from late last year.

MR. FREDRICHS: Okay. Thank you.

MR. BAILEY: Paul Bailey, ICF. Tom, one of the recurring issues in any kind of present value technique is what discount rate is acceptable, and I didn't see that in your paper here. Is that something that NRC staff is giving thought to in the context of whether or not to accept the discounted parent company guarantee?

MR. FREDRICHS: Well, I guess the suggestion was that it would be a 2% discount because that's the discount we allow in our regulations for a trust fund and I haven't heard any other thing like that, although when you bring up the question, what discount rate, you're also going to ask discount from what, because the NRC does a lot of it's evaluation of adequacy of the funds in constant dollars. But, we also know that if your cost estimate today is $500,000,000, it's going to cost a lot more than that in real dollars or nominal dollars at the time you do it.

So, we haven't really considered this but it may be something we should consider. If you do allow a discount, maybe it should be discounted from the real future value or the future value that you would project out rather than taking, well it's

$500,000,000 today, sort of an overnight cost, we'll put that 50 years in the future and then discount it back. So it's a good point, but 2% is I guess what everybody understands we would use, at least at it's been presented up to this point.

MR. WILLIAMS: I'm Dan Williams, I'm a consultant, retired from GAO and I've written a number of papers and done some modeling research on this stuff, so that's an introduction. And I'm an economist, I have a problem with the concept of present valuing a promise.

If I were a company and let's say the trust fund you think you'll have all but say $100,000,000, and you'd like to have a parent guarantee for the last $100,000,000, I would love to have to only have, say, $25,000,000 of that because once you got to bankruptcy you will only have to give up whatever slice of that you lose, but it would be a slice of $25,000,000.

I mean, it just doesn't make any sense because what present value is, in concept, it tells you whether the cash you have in your fund as of such and such a date is not adequate and you might say according to some benchmark, say if you had $25,000,000--I'm changing, say, $100,000,000 you had already in your fund, but on a present value basis, looking at future costs with your projections on how fast it should grow, that should be fully adequate, which we're talking about actual money.

I mean, I just don't understand the concept of present valuing a promise. I mean my, just to shorten it, my basic view is this sort of parent company guarantee should be used as just further insurance, the trust fund should do almost all of it and just as an insurance that in case things aren't right, there's an extra backstop to cover the rest. It seems like, it looks like the Companies have been treating this as the need to contribute less each year, because the check will be in the mail and this sounds like now they want the present value of whatever's in the check in the mail. And, you know, it just doesn't make any sense to me, even if it's legal. That's all.

MR. FREDRICHS: All right. Thank you, Dan. I think the point was, and I think that we also said it in the presentation, that the parent guarantee doesn't have any cash behind it so since there's nothing to make any earnings it doesn't make sense to discount it back, if that's the gist of what you were saying. Thank you.

FACILITATOR ANDERSON: Let me just as an opportunity to check in with folks on the telephone, does anybody on the phone have a question or comment for Tom?

(NO RESPONSE)

MS. KASS: Thank you. This is Leslie Kass with NEI. I guess in response to the question just raised, we view the parent company guarantee like the rest of the fund, that in today's dollars you need to have a certain minimum assurance amount. We may be capturing a piece of that, the shortfall or other, with a parent company guarantee.

As allowed by regulation, we're assuming that if the NRC sees that money today or the obligation in the future, it would grow just like the rest of the fund, and we also have in most of those cases, offered every year to look at that and see if we need to make adjustments to bring it up to the minimum value.

So, we're not saying that we are relying somehow on the static parent company guarantee to magically grow. I agree with you, that wouldn't make any sense, but we are updating it annually and also then in the biannual portion to make sure that we are meeting the minimum that then is allowed to grow per

NRC rules.

MR. FREDRICHS: Thank you.

MR. HAYES: I think Leslie covered most of my point. The only other comment I would make would be around, I think on slide 19, I think slide 37, there was a point--you don't need to go to the slide but there were a couple of points where they suggested that there was no collateral or funding to secure the guarantee, and while that is true, you know, there is a six times test so you have to have six times tangible net worth and access to the guarantee amount so that in essence is implicit collateral. Would you agree with that?

MR. FREDRICHS: Well, my understanding of collateral is something that, I guess if you don't meet your obligation, can be seized. And, I don't see a scenario where the NRC would seize six times the face amount. In fact, we would never seize it because then the treasury would get it, but we wouldn't order you to pay it into a trust fund because it's not collateral.

You don't--the other thing is of course because, collateral is also something that's tied to whatever the obligation is, that it'll be there. I mean, the parent company guarantee would give the NRC the right, first of all, the licensee would have to not be able to pay decommissioning, which means it would be shut down, not operating.

That's part of the contingent nature of the guarantee. The other thing is that if we go to get the money, it may not be there, and there's, unlike collateral where there's a lien on it and a legal right to seize that, we don't have any legal right to seize it.

MR. HAYES: All right, well what I'm getting at is, you wouldn't seize six times our tangible net worth of a guarantee, it does provide some assurance that we have enough assets to potentially monetize or liquitize in the event you had to exercise the guarantee so that, in conjunction with the annual updates of the guarantee as well as the biannual reporting of the guarantee, I would think that would be sufficient coverage of any shortfalls in nuclear decommissioning trusts.

MR. FREDRICHS: Well, that would be I guess one of the facts, well, one of the factors in considering equivalency. If we want to consider does a discounted guarantee, is that equivalent to a full value guarantee, I'm not sure how we would come to that conclusion if you know, one says, I'm guaranteeing $171,000,000 and the other says $405,000,000, it would seem that we would have a hard time finding those two equivalent.

There are other equivalencies you could imagine, and one of them that's alluded to is, well, if it was $171,000,000 in cash in a trust fund we'd be satisfied with that, so why not a guarantee for the same amount. But there the equivalency is more on the fact that cash in a trust fund is proof against bankruptcy, a guarantee is not, it's vulnerable to bankruptcy.

So, you know, when you start working through this, there's more, it's a multifaceted, you know, evaluation and you have to consider all the factors, so there may be ways to do it. One way to do it is say, okay, if you are willing to concede that it's not equivalent to something that's already in our list, you could say well maybe I can add some condition to this, or make it equivalent.

And that's where, you know, I had some slides about what sort of conditions, you know, rather than setting a benchmark for it, you could say well, okay, actually put money in escrow and it'll stay there, guaranteeing the securing the guarantee until such time as you know, you terminate the guarantee.

And there may be other ways. Maybe it could be actual collateral if we had first liens if we were willing to go through the extra burden of maintaining those liens. There are things that could potentially be done. I'm just suggesting that we need to find equivalence and the equivalence isn't necessarily a one sentence finding.

MS. SIMMONS: I'm Anneliese Simmons, I work for NRR. I think to your question what we're in terms of comments, that is something that the staff is very interested in understanding. There is this sense that you need to have six times the net worth. What we don't, it's our perspective now, and what we'd like to understand is those assets are not restricted, you know, there are certain liabilities where you do have to have an equivalent amount of cash that is restricted from the company's use, okay.

There's probably more to that story, and I think that that's the kind of comments we're looking for as to what's really happening and how it impacts your Companies and what assets might be not available for other use.

MR. FREDRICHS: If I could just add that that I guess reminded me of another thought, that because we only require possession, you know, and the argument might be, we have enough cash to cover it, but you might also ask, well, maybe we need to look and see whether or not your assets are already encumbered and therefore not readily available or only available as a non-lienholder claim on some of these things. So that would, might be something we'd want to look at to see you know, whether there were assets that actually weren't free and clear.

FACILITATOR ANDERSON: Are there any other comments or questions here at NRC headquarters?

MR. LEVIN: Adam Levin, Exelon Generation. I am struggling I guess to understand the notion that a parent company guarantee when considered in the same fashion that as Kass mentioned which is that parent company guarantee would be looked at every year, adjusted as necessary, which is essentially required of us by regulation.

I'm struggling to understand how or why that should be treated any differently than cash, which if you deposited cash you'd be depositing the discounted amount that's required to meet your goal at the end of the day, or putting up your credit, which again would be a theoretically discounted amount that would be required at the end of the day.

So, I'm struggling to understand why

you're considering a parent guarantee to have such a different or if you will--

MR. FREDRICHS: Okay, well if it was a full value parent company guarantee we wouldn't have any objection.

As to the using the guarantee as a cash substitute, so to speak, that would be adjusted every year, that gets back to I guess is actually equivalent to cash. And as we were talking about, it's vulnerable to bankruptcy and it's possible, because there's no restrictions in our regulations, that the assets that we would need to use or have access to to draw on that instrument may already be encumbered because there's no requirement that you can't.

So, that's one reason why I guess the parent company guarantee would be looked at differently than cash. But as far as the present value concern is, you might also consider as Leslie mentioned, well maybe have a letter of credit, how about a surety bond. But that also gets back to the first regulatory hurdle, that there are no provisions for discounting them.

FACILITATOR ANDERSON: Any other questions or comments here in the auditorium at NRC headquarters?

(NO RESPONSE)

FACILITATOR ANDERSON: How about on the telephone? Anybody on the phone have a question or comment for Tom?

(NO RESPONSE)

FACILITATOR ANDERSON: Was there a hand in the back of the room? No? Okay. I think that's it. Thank you, Tom.

MR. FREDRICHS: Okay, thank you all. And like I said, I mean you'll probably think of something, you say I wanted to say that, well you have a chance. You have, you know, the next month to send in comments, so please do.

FACILITATOR ANDERSON: The next presentations on the agenda are by Exelon Generation Company.

MR. LEVIN: Thank you, and good afternoon. My name is Adam Levin and my position with Exelon Generation is Director, Spent Fuel and Decommissioning. And in this role I provide governance and oversight of spent fuel management and decommissioning strategies of Exelon's fleet of 21 nuclear units.

While I've only been with Exelon for the past 13 years, over the past 33 years I've had the pleasure of working with more than 90% of the commercial power plant decommissioning projects completed to date, principally in the areas of engineering and cost estimating. Next slide, please. Excuse me.

I'm here today to talk about two areas in particular that are of concern to Exelon, specifically the timing for resolving the decommissioning funding shortfall--assurance shortfall, and the method by which the value of a parent company guarantee is calculated. With me today is Mister Reijji Hayes. Reijji is Exelon's corporation--Exelon Corporation's Assistant Treasurer and Director of Corporate Finance and Financial Strategy, whose address will focus on greater detail on using parent company guarantees to provide funding assurance and about why a net present value measurement of funding assurance requirements is the appropriate methodology for determining funding sufficiency. Next slide, please.

Before addressing these two issues, I'd like to take a few minutes to summarize where one was two years ago and where we are today with respect to the status of our decommissioning trust funds. As of December 31st, 2008, Exelon did not meet NRC's minimum funding assurance requirements found in 10 CFR 50.75

for a number of nuclear units.

In response to NRC staff requests, Exelon implemented a number of actions to resolve the funding shortfall, which included obtaining parent company guarantees. Next slide, please. Improvements in the condition of the financial markets as of December 21st 2010 have changed the previous situation quite dramatically.

Exelon is no longer underfunded with respect to NRC minimum funding assurance requirements and will be notifying that parent company guarantees are no longer required to meet funding assurance minimums. Within a fairly short period of time, two years, the trust funds have recovered sufficiently to meet NRC requirements without requiring additional funding assurance mechanisms or cash contributions to the trust funds.

The currently existing regulatory framework which suggests funding assured shortfalls should be mitigated by the next biannual report if they still remain. As demonstrated that funding of long-term liabilities such as these do not need to be subject to short term mitigation strategies as a result of changes in financial markets and that the two year window from the date of funding assurance shortfall recognition to the time by which underfunding should be remediated is a reasonable regulatory requirement. Next slide, please.

Following Exelon's submittal of it's biannual funding--biannual decommissioning funding status report in March 2009, NRC staff and Exelon held a number of discussions to address the timing of entering into guarantees to address the gap in funding assurance. Staff's interpretation of the regulations repeatedly focused on a remediation of the funding assurance shortfall within a short time after it's initial recognition and indeed by the time the biannual report was filed in March 2009.

Exelon continued to maintain that it's interpretation of the remediation was to be no later than by the filing of the next biannual report on March 31st, 2011. Exelon referred NRC staff to a number of existing documents including staff's 2002 response to comments made during the promulgation of the current regulation and to SECY-06-0073, both of which in Exelon's opinion support remediation of a funding assurance shortfall within a 2 year time frame.

Ultimately, however, Exelon agreed to obtain parent guarantees prior to the two year period provided by the regulatory guidance in SECY-06-0073, while concurrently requesting continuing dialogue with NRC staff on the issue. Next slide, please. In Exelon's opinion, requiring resolution of the funding shortfalls within the three month period advocated by NRC staff imposes an extremely shortsighted view of the financial markets on licensees.

Additionally it presupposes that the financial markets have suffered a permanent displacement, never to return even marginally to pre-downturn levels. The regulatory framework should continue to maintain adequate flexibility and to recognize and allow for all periods of market recovery and less volatility.

The currently existing regulatory framework which supports funding assurance shortfalls should be mitigated by the next biannual report. Quite frankly, that does work. And the two year window from the date of recognition to the time by which the funding assurance shortfalls should be remediated is justifiable. Next slide, please.

First, requiring an expedited period to resolve funding assurance shortfalls might result in actions that could be detrimental to funding efficiency. Exelon remains of the opinion that it made more sense in the short term to allow the markets to sort themselves out, identifying any new directions and carefully and in a thoughtful manner, rebalance the portfolios to reflect resulting forever changed economic realities.

Second, decommissioning liabilities are very long-term. Rebalancing portfolios when they are severely diminished in value in the short term sets up strategy for investing in higher return and higher risk vehicles in order to meet the future liabilities and in the process generating taxes on realized gains earlier than planned, eroding long-term fund value.

And, finally, letters of credits, assuming that they were even available during 2009 and early 2010, would have been costly to obtain, and as such, Exelon settled upon using parent cooperation guarantees. Next slide, please. Over the past two years, Exelon has expressed disagreement with NRC staff position regarding the use of parent company guarantees.

Exelon's position is that the face value of the parent company guarantee should be based on the net present value of the funding sufficiency shortfall. Additionally, the parent company guarantee should be updated annually as required. This methodology satisfies the impacts of the market value changes, cost escalation, changes in decommissioning requirements and any other effects which may impact future decommissioning costs.

This methodology is consistent with how the NRC minimum formula worked for prepayment methodology defined in regulation. The technical basis for net present value method, I'll defer to my colleague, Mister Hayes. Exelon also disagrees with staff, with the staff's assumption that all decommissioning expenses in a given year of decommissioning activities are withdrawn before income on trust funds is realized, the so called end of year convention for return on investments.

Simply put, the approach staff has taken assumes all decommissioning costs in a given fiscal year are incurred on the first day of the fiscal year. This approach is unnecessarily conservative. Decommissioning costs are typically incurred throughout the year, with disbursements from the trust funds at least 30 days in arrears. Next slide, please.

Exelon continues to maintain, and the Commission agrees, that establishing parent company guarantees by the next biannual submission, if required, is the right approach. And in fact, as I've already noted, Exelon believes the most recent experience has demonstrated rather convincingly that is is reasonable to require no earlier than a 2 year cycle before a guarantee should be established.

The approach used by NRC to determine face value of parent guarantee has no regulatory basis and is inconsistent with generally accepted accounting practices, as Mister Hayes will discuss in a moment. In fact, if a parent company guarantee is ever executed, and if the guarantee amount is adjusted annually as proposed by Exelon, the cash deposit along with the balance of the trust funds, will meet obligations through the decommissioning period.

This combination of funding assurance methods and net present value parent company guarantee plus prepaid trust fund assets always satisfies minimum funding assurance requirements, and provides sound justification for using a net present value for the parent guarantee face amount. I know Mister Hayes will have a lot more to say about present value and future value calculations, as well as parent company guarantees, so I'll turn over the floor to him. Reijji?

MR. HAYES: Well, thank you, Adam, and

good afternoon, everyone. As Adam mentioned, my name is Reijji Hayes. I'm the Assistant Treasurer and Director of Corporate Finance and Financial Strategy at Exelon Corporation. I've been with the company since May of `09, prior to that, I was an investment banker. Spent several years on Wall Street, where I focused on corporate finance advisory, as well as mergers and acquisitions advisory.

In my career, I've executed more than 20 corporate finance and M&A transactions and I've spent countless hours advising senior management teams on asset valuation, deal structuring, and strategy. The reason, as Adam mentioned, why I've accompanied him and the other Exelon members here today is to provide additional insight on the matter at hand, specifically the merits of utilizing net present value calculations for estimating shortfalls and DTS or nuclear decommissioning trusts.

And then also to offer my perspective on parent guarantees as a funding assurance mechanism, so this is a topic that's relevant to my group for a variety of reasons, namely we are responsible for issuing and tracking the parent guarantees across Exelon. I'll get into this a bit later but this is a matter we take very seriously and it's a line item within a number of accounts, you know, balance sheet or off balance sheet that we monitor very closely, and again, I'll get into that a bit later.

We also are responsible for structuring, planning, and executing all of the debt financings, or any financings, debt equity, you name it. On an annual basis, we structure, plan, and execute those and they could be anywhere from a half a billion to two and half billion dollars a year, and we're very well versed and I'm very well versed in the current valuation methodologies by U.S. GAAP, SEC, and other bodies for when it comes to the valuation of debt and other obligations like asset retirement obligations, which is the matter at hand, of course. Next slide, please.

So, on slide 2, I realize a number of people here are well versed in this topic but just to get everybody grounded I wanted to spend a little bit of time on the technical aspects of the net present value calculations so you know, conceptually I think most people are familiar with this but a net present value calculation is the estimated value, or present or current value of a stream of future cash inflows or outflows.

So, in essence, mechanically what you'll do is you'll take a series of cash flows, let's say it's $100,000,000 dollars per year, and you will divide that by a discount rate which, you know, for our purposes, we're assuming 2%, and you'll take into account the time period in which the cash outflow or inflow took place. So mathematically, if you look at the format, formula highlighted in the schematic, the numerator consists of the cash flow, inflow or outflow, and the denominator consists of the discount rate and time period.

And, you know, basic third grade math, the larger that denomination is, the lower the value or the quotient you'll yield. So, if you look at the two variables there, you've got your interest rate. The higher that is, the higher the denominator so the higher the discount rate, the lower the value of the cash flow and the larger the time period, the lower the cash flow, which means, the basic premise is, a dollar today is worth more than a dollar tomorrow so money that you're not obligated to pay, 10, 20, 30 years form now is worth a lot less than a dollar you have in your hand because that dollar that you have in your hand can be reinvested at some rate of return and accrue over time.

So, just to get everyone grounded, and the reason why this is important is it's really the key concept upon which our argument here is predicated and this calculation is obviously widely used, not just in investment banking but in a broader business world to account for investments, long-term projects, M&A, and select obligations, among other uses. Next slide, please.

So, in addition to the valuation of assets and liabilities, on slide three we have highlighted the other uses of NPV or at least some of the other uses of NPV calculations and the rationale for using this calculation. There are several reasons for using NPV. One and primarily as far as this matter's concerned, is that it's a very good proxy for the fair value of an asset or a liability, so NPV calculations are often used in the absence of a readily available market price.

If you look at FAS 143 or specifically FAS 157 it clearly stipulates, and that's--I'm sorry, I'm speaking within U.S. GAAP or generally accepted accounting principles, but FAS 157 specifically states that in the absence of a readily available market price that a net present value or estimated present value methodology needs to, should be used.

And as an investment banker in my prior

life, there were numerous valuation methodologies we used when we were valuing business. Discounted cash flow analysis was probably one of the most prominent we used, particularly when rendering fairness opinions and that methodology in itself is a net present value calculation because you're taking the estimated cash inflows of a company out several years and discounting them back at an appropriated discount rate to make sure that you have a good estimate for the present value and in other words, you know, what you should pay for an asset.

Another reason why the NPV calculation is used is because it reflects economic reality. In other words, you know, going back to the concept I discussed in the prior page, you know, since a dollar today is worth more than a dollar tomorrow, then valuing an asset or a liability by its future or nominal value can be misleading and may lead to potentially overstating an asset or a liability which is highlighted in the next bullet point.

And the reason we're concerned about this is multiple stakeholders rely on the information and a company's financial statement. Obviously, investors, creditors, rating agencies, and regulatory bodies. So, using NPV reduces a likelihood of overstating those assets and liabilities, and, you know, with all due deference and respect to the folks at Moody's, we also have other counterparties who assess the liabilities and the risk of our business.

There are other rating agencies--S&P and Fitch--there are also other counterparties for ratings upon which we are the guarantor, who also look at liabilities, guarantees, and all the other debt-like obligations in our portfolio and certainly assess whether or not, you know, the business is at risk beyond the amount of debt in the balance sheet.

So, multiple stakeholders use this information and I, just to put things in perspective, I wanted to give an example of a liability we have in our balance sheet which highlights I think the disparity in the way in which Exelon Generation, NEI, and the NRC are viewing this. So, for example, we issued $900,000,000 of debt in September of last year on Exelon Generation's behalf to provide funding or financing for the acquisition of the John Deere renewables business.

$550,000,000 of that debt was ten year money or ten year bond which had a coupon of 4%, paid semi annual so if you do the math, we're on the hook for $11,000,000 every six months or $22,000,000 annually and at an aggregate it's $220,000,000 over the life of the bond. So from our methodology or the way in which we view the world, we view that liability as a $550,000,000 liability because that in fact reflects the present value of the liability.

And if you look at our balance sheet and any other company that has issued a bond of the last several years, they would book the bond at participation or equivalent to the present value or participation at issue, which is $550,000,000. Now if you applied the NRC's methodology to the accounting o that bond, you would take the $550,000,000 at principle that you owe at the end of ten years and add to that the aggregate value of the interest you owe so the $220,000,000 and in essence would be booking a $770,000,000 liability.

So from our perspective, that is overly conservative and dramatically overstates the value of that liability. And then as mentioned I think in several of the presentations we saw today, it's obviously a mess that's a present value methodology is obviously one that's used by U.S. GAAP and is used for SEC and SEC reporting, so we're very comfortable with it.

It's used for a number of other

obligations such as pension, other asset retirement obligations, so we think it's very consistent with the way in which the rest of the world views this accounting technique and also again, it reflects economic reality. So as such, you know, Exelon, we use the NPV calculation to estimate the future obligations for our pension and asset retirement obligations, as well as other post-retirement employment benefits and capital leases.

Next slide, please. I won't spend a great deal of time on this because we've talked about this a lot but you know, again, as it applies to Exelon Generation, we think NPVs today are relevant because there's a clear disparity in the way in which we, Exelon Generation, and the NRC are estimating the nuclear decommissioning trust shortfalls, so as we all know, Exelon Generation company has a legal obligation through the NRC to decommission it's plants at the termination of operations and to estimate the value of that future obligation for reporting purposes.

So, Exelon, we, if you read through our 10-K, you'll note we use a probability weighted discounted cash flow model which is consistent with U.S. GAAP and conforms to the methodology used by other Companies in the power energy sector. So in short, that model projects out the cash outflows associated with decommissioning and brings them back or present values them back to the current date to reflect economic reality.

And, it's probability weighted because we take into account the various ways in which you can decommission or choose to decommission a plant, either through safe store, license extension or decon, which, it's my understanding that that's the shortest way in which a plant can be decommissioned so we probability weight and take into account for each nuclear commercial unit in our portfolio, which methodology of shutting the plant down has the highest likelihood and then we discount those cash flows back to present value.

So at the bottom of the page, not going to get into all the bullets because I think everyone's well versed on, you know, the NRC regulations but you know, the real crux of our argument if you look at the bottom section, the second to last sub bullet, I do want to highlight this point here, and that is the assumption of parent guarantees used for minimum funding assurance in future dollar estimates as opposed to NPV cost estimates to determine funding assurance requirements.

Because this is a real issue for us, as Adam highlighted, and if you turn to the next slide I can provide a little more color as to why we think that that's a problem. So, due to the broad usage of NPV calculations to estimate the values of assets and liabilities, you know, our position remains that utilizing future value to estimate the shortfall you know, ignores economic reality and may materially overstate an asset retirement obligation.

And to provide a real world, yet another real world example of our concern here, if for example, someone buys a house for a half million bucks and finances it with a $400,000, thirty year non-amortizing loan at 5%, you know, if you're in a better credit rating than I am, you know, you're on the hook for $20,000 a year in interest payments. So if you take, do that math, $20,000 a year over a thirty year period, you're going to pay $600,000 of interest over the life of that loan.

If we apply the NRC's methodology to this math here, they would be on the hook for providing a guarantee in the amount of a million dollars up front, so that's the $400,000 of principle they owe on the loan, plus the $600,000 of aggregate interest, and that doesn't take into account obviously the fact that a buyer could refinance that loan, thereby extending the maturity of the loan itself, or if they sell the house in advance, which obviously would make them rid of the obligation itself.

So, we think it's again it's very conservative and infrastructure act if you apply this methodology to the home ownership process in the U.S. I don't think many homes would be sold, frankly, because it's just too draconian. So, to put this in perspective, you know, we believe, you know, we are really at risk here significantly over-collateralizing this long-term liability in the near term, which may prove unnecessary if a plant's license is extended, you know, which has happened quite a bit.

I think 61 of the 104 nuclear plants have had their license extended, so that's roughly 60%. And then also you know, and that's over the past 11 years, and then you have 21 or rather, sorry, the balance of nuclear plants already have license extension applications in process or planning to.

In addition to that, 21 commercial nuclear units have shut down prior to the expiration of their respective licences in the past 45 years, including our Zion 1 and 2 units, and it's also worth noting and I think Adam highlighted this as well, that no retired commercial nuclear units are or have been at risk of not meeting their decommissioning obligations.

So we think the biannual reporting as well as the annual reporting that's required as Miss Kass highlighted, you know, provides sufficient transparency as to whether the future or future decommissioning obligations appropriate funded. And then the use of a parent guarantee, you know, the fact that it requires this annual update or annual submission to the NRC to show you where we are, again, it's sufficient, it's sufficient coverage, in our opinion.

So. Additionally we spent a lot of time talking about this and asking questions when Tom was nice enough to go through his materials. We are also very concerned about the six times net worth test. Not the degree that it's six times but the fact that, you know, though we currently have sufficient tangible net worth capacity which is roughly ten billion as of June 30th of 2010 when we last issued a guarantee to support the Braidwood 1 and 1 and Byron 2 facilities, you know, this metric can decline in a number of ways.

So, in the event we have an asset write-down, a share repurchase, or large special dividend that number can go down, you know, though we don't anticipate having any of those events happen we really think that the NRC's position limits our operational and financial flexibility and I'll spend some more time talking about that on the next page.

So, as I mentioned earlier, we take guaranteed capacity very seriously, it's a fundamental part of the business. Not only do we use guarantees to provide assurance for shortfalls for nuclear decommissioning trusts, but we also issue them to support our trading operations. So for example, when we by and sell power forward, in the event we buy power forward we're on the hook for providing a guarantee so the counterparty in that trade knows that we are good for that money.

And so to just elaborate on my earlier point, we have been counterparties in trades in which we looked very closely at the counterparty's, or the guarantor of the counterparty, we look at the guarantees they had on their books and were very concerned at the levels that some companies had. So while some rating agencies may be agnostic about this, and I'm not suggesting any of them are because I do think they take them into account, in addition to the rating agencies we're also concerned about the perception of Exelon in the event we have a large amount of guarantees the perception of Exelon when we try to do trades with other parties.

So they do take a look at the guarantees we have outstanding and in fact, we know for a fact when we look at some counterparties that have high guarantees we actually take it into account as debt and so we are actually quite draconian when we assess them when we're doing trades. So another potential issue I wanted to highlight is that, you know, overstating the assurance requirements could potentially lead to ratings pressure which could lead to more costly funding measures such as letter of credit costs, historically, and I think Jim alluded to this earlier, the rating agencies have excluded including guarantees on our balance, or guarantees that we have, not on our balance sheets but the guarantees that we have, they have not included it in our total debt calculations but they may in fact do that.

And in fact, there are a number of off balance sheet liabilities, such as PPAs, power purchase agreements, unfunded pension obligations, which are currently imputed as debt though they may not appear on the balance sheets. So while they are not currently on our balance sheet, you know, there's no guarantee that they may not start including those so that's why we do not want to be, we do not want to overstate these and we do not want to be cavalier about the amount we issue.

And in fact the process internally at Exelon as it pertains to issuing guarantees is so stringent that the Board has to effectively approve any guarantees issued to support nuclear decommissioning trusts and I think the latest threshold is $100,000,000. Anything above that would have to go directly to the Board so we view this like debt internally, whether it's not currently imputed as debt by the rating agencies, we still view it internally as debt so we do not want to start issuing large amounts of that.

Next slide, please. Just to highlight another issue with--excuse me. Just to highlight another issue with the six times test and also you know, this point about overstating the liability, you know, given the current requirements by the NRC to use future value in conjunction with this six times test, we looked at, historically we took a look at you know, what the implications would be on new nuclear build.

So, what we did is if you focus on the charts below the table on the lower left, we estimated the cost, the decommissioning costs for dual unit in 2003 dollars so we show the aggregate amount of 1.1 billion. We gross that up using a 3% escalation rate to come up with a 2011 current value amount of 1 and a half billion and so that per our estimates would be the decommissioning costs if you were going to have to decommission a new nuclear plant today, so one and a half billion.

So we thought about, if you have a full license period of 40 years, what happens if you escalate those costs up for the next 40 years? So we took that one and a half billion and grossed it up by 3% over the next 40 years and came up with an amount of roughly 5 billion, 5.1 billion, and obviously with this six times test, that guarantee would breach any covenant or at least as far as our net worth or tangible net worth balance stands it would breach that.

So, it really does preclude operational flexibility and would not allow us to build a new nuclear plant if we were to adhere to the NRC's current position on this. Next slide, please. So lastly, just to show some of the other financial implications of using future value, we've done a little bit more math here and you know, to make this final point what we tried to do here is just highlight the--we've tried to highlight the potential costs or incremental costs in the event we could not issue guarantees.

So, one example or substitute for a guarantee is a letter of credit. So what we’ve done is on the lower left hand corner we've showed a sensitivity around potential nuclear decommissioning shortfalls at a variety of our plants, so Braidwoods 1 and 2, and Byron 1 and 2. These are both merchant plants and currently do not have licenses--or, sorry, all four of these are merchant plants and currently do not have license extensions.

So what we've done here is in the x axis, we've looked at changes in the values of the nuclear decommissioning trusts, anywhere from down 5% to down 20% and we've taken the total of that shortfall and you can see it ranges form anywhere from roughly $100,000,000 to just over $650,000,000, and so we've taken that range and applied it to the table on the right hand side.

So if you look at the x axis on the table on the right we've shown a range of LOC support and again this is in the event we'd no longer have access to parent company guarantees and it shows you you know, if we have to provide letters of credit to the amount of $200,000,000 to $800,000,000 and apply a variety of LOC costs, you know, we're showing 150 basis points at the low end, we think that's a pretty good proxy for market today.

And then if you flexed it to the credit crisis period when we were at extremes and we saw loc costs as high as 400 basis points, if you take that you know, worst case scenario of the fund being down 20% and then apply it to the, you know, the credit crisis rates of 400 basis points you could see our annual interest expense go, you know, we could have 25, excuse me, 25 to 30 million dollars of incremental interest expense, which obviously, you know, that's a lot of money and frankly you know, again as I mentioned if we have a significant amount of guarantees on our books, our counterparties in trades do look at that, they assess it and they do bake that into their assessment of whether we are creditworthy and worth you know, engaging in a trading operation. So, that's it in a nutshell and--do we have time to take questions?

FACILITATOR ANDERSON: We do.

MR. HAYES: Great.

FACILITATOR ANDERSON: Thank you, Reijji, and thank you Adam. Does anybody here in NRC headquarters have a question or comment?

MR. SMITH: Jaeger Smith for Entergy. Reijji, I appreciate your comments, and I would say as someone representing the second largest nuclear operator in the United States today, that I see the same kind of things coming our of our treasury Department. We're not in the same situation as you are with as many guarantees but we do have one parent guarantee in place and our treasury Department feels the same way about these things as you do. They don't deem them as costless, there are a lot of record keeping requirements that go with them so we share the views that you just talked about.

MR. ANDERSON: Rick Anderson, Dominion. Reijji, we appreciate your comments today. We feel the same way as you do as well as Entergy does on the key points that you pointed out today.

MS. HOFMANN: Sarah Hofmann, state of Vermont and I'm afraid I'm not going to say I agree like the last two men did but I did have a question on the, you indicated you had to come up with parental guarantees when the shortfalls showed up, and can you tell me how much for all of your plants that was? How much was the total of the parent guarantees?

MR. HAYES: Yes, the latest balance was $219,000,000. However as Adam mentioned that amount is no longer necessary because the nuclear decommissioning trusts have now recovered to the point where there's no longer a shortfall.

MS. HOFMANN: So approximately how long did you have those parent guarantees in place, then?

MR. HAYES: Literally, 12 months. Less than that, I think. Yes. Somewhere between six to twelve months.

MS. HOFMANN: And what was, what were some, what were the specific costs of having those parent guarantees in place?

MR. HAYES: To be clear, and for the record, there currently are no direct costs associated with issuing a guarantee so there's not incremental interest that hits your income statement. However, as we highlighted or at least we tried to highlight, there are a number of indirect costs in the event that amount escalates to a material number. And that's what we're very concerned about.

MR. LEVIN: I think it's, if I can put it a little bit into context for you, we have approximately 5 and a half billion dollars decommissioning trust funds so, you know, let's assume for a moment that we are in a position where the funds did drop $500,000,000 or something larger than that. Potentially, looking at the and I do want to try to put some, a little bit around this, we had initially proposed using a parent guarantee method and a present value method for that parent guarantee. Was approximately $31,000,000 and with the NRC's formulation or view we were required to put up $219,000,000

Now, again, we're in a place where we only had to put up $31,000,000 originally. If that had been several hundred million dollars and we are now looking at a future value of that we would potentially be looking at something like 700 million to a billion dollars. And that would raise eyebrows, no question about that.

FACILITATOR ANDERSON: There any other questions?

MR. FREDRICHS: Reijji, on one of your slides, maybe one or two before this one you were projecting out the peak eventual costs for two units and it worked out to 5 billion dollars at some point in the future. And, I think you're comment was well if we had to have a parent company guarantee for that amount of money that would be very difficult.

On the other hand, that's not what we're asking. We're not asking you to project out the costs of the future and cover that, We're only asking you to cover the amount that we determine in our own analysis which is based on constant dollars where you don't inflate the value. So I wanted to make that point--

MR. HAYES: Does that suggest that the one and a half billion dollars is accurate on the left hand side?

MR. FREDRICHS: What, that's what, Braidwood 1 and 2? Or--

MR. HAYES: No, it's just dual unit--

MR. FREDRICHS: Just dual units. Two units decommissioning costs 1.5 billion. There might be some BWRs that could amount to that much, two of them, and if that was the decommissioning costs, then you'd want to use a parent company guarantee, we would expect that's, yes, that would cover that with the parent guarantee.

MR. HAYES: Right and so, you know, six times that, and my math could be rusty, is roughly eight and a half, 8.6 billion dollars.

MR. FREDRICHS: Yes.

MR. HAYES: And so you know, as I mentioned, we have, as of June 30th, we had about 10 billion of tangible net worth but a number of events could lower that number that would allow us to breach that covenant pretty easily.

MR. FREDRICHS: All right in other words you can’t afford a parent company guarantee at full value to cover that full amount.

MR. HAYES: Yes, that one and a half billion is quite large and I think it’s the sort of number where if we issued a parent guarantee though the rating agencies have historically not included in our imputed debt numbers I think they would certainly take a long hard look at that, and we've had discussions with a number of our advisors at investment banks who know the rating agencies well and with the rating agencies themselves and they said though they institutionally do not include it, there's some people within those agencies who do view it as debt, so you know, that's a number we would think long and hard about before we even issued that, so put 5.1 billion aside, one and a half billion still doesn't allow me to sleep at night.

MR. FREDRICHS: Okay.

MR. LEVIN: I'd also like to add to that too and I think this is the whole point here, is that allowed and considering a net present value of that parent guarantee you're now talking about $623,000,000 face value, which would now give you a great deal more flexibility to pursue what you needed to pursue in terms of building new nuclear units, which are in and of themselves an expensive proposition.

MR. FREDRICHS: Well of course you have alternatives, it doesn't have to be a parent company guarantee. The other, the other thing I got from your talk is that it's not so much the $219,000,000 that you're guaranteeing now but a concern that over a period of time a parent company guarantee, it might escalate and that might cause you a problem.

And I think this is an example of that. The other thing is to maintain a trust fund amount at the net present value and in which case you wouldn't have to have parent guarantees, normally, at least. They might be used as short term things like you're using this one now.

MR. HAYES: TO be clear, when you say a trust fund at present value, do you mean a nuclear decommissioning trust?

MR. FREDRICHS: Yes.

MR. HAYES: I believe those are currently calculated at fair value. Is that--the fair value is effectively present value.

MR. FREDRICHS: The way the NRC understands it, if given a merchant plant, we would use a 2% discount rate to determine what the net present value is. From the time of shutdown until, well, whatever time you were starting from. If that's the same as fair value, then fine, but since I'm not sure exactly how you do fair value I wouldn't say it's necessarily quite the same.

MR. HAYES: All right well as I mentioned in the absence of a readily available market price, but, you know, if you have a nuclear decommissioning trust you do have readily available prices, so fair value is a decent proxy for present value and if there were not, let's say the trust was comprised of a lot of illiquid assets like real estate, private equity funds, and things of that nature as opposed to public equities they would likely use a present value calculation to come up with, as a proxy for fair value of those assets.

MR. FREDRICHS: Okay, well, if in that reactor example that I talked about with NEI, if fair value works out to $171,000,000 in the trust, then that's fine with me. That would be the same number that we have. The other thing I wanted to ask, you talked about the PCG adding to your liability and that's something I don't entirely understand because you already have an account, you know, ARO accounts which are accruing the liabilities over time for decommissioning using the GAAP methods.

And are you suggesting that if you issue a parent company guarantee that your total liability for decommissioning has now increased because of the guarantee?

MR. HAYES: I if heard you correctly, you're asking just to simply you're asking do we currently assume that the guarantees are in fact debt on the balance sheet? Is that what you're asking?

MR. FREDRICHS: Well, no, although that's a good question I'd like the answer to.

MR. HAYES: I'm shooting myself in the foot.

MR. FREDRICHS: No, you have an asset retirement account, and, you know, its FAS 143 tells you every year this is how you enter it onto your books and you're doing that.

MR. HAYES: On a present value basis, yes.

MR. FREDRICHS: Yes. And we don't argue with that so that's okay.

MR. HAYES: I'm sorry, what?

MR. FREDRICHS: We don't argue with GAAP

so, but what I'm asking is, you already have that on your books, and now until you terminate the parent company guarantees you also have $219 million in a PCG. Does that mean that your liability for decommissioning, that 219, is added to what's already on the books in the air or always to somehow increase your liability this year?

MR. HAYES: No, I, I don't, no, that's not the case.

MR. LEVIN: The ARO does not change because of the presence of the parent guarantee.

MR. FREDRICHS: Okay, thank you. Well the other question which I probably would have asked anyway is are the parent guarantees that you have recognized on the liabilities in the balance sheet or is an off balance sheet?

MR. HAYES: NO, they're currently off-balance sheet. In fact we highlight them in our SEC filings so in our 10K it's kind of in the 300 page range, or 10K's about 800 pages but it's in the notes of the financial statements. We do disclose fully the amount of guarantees that we have outstanding so while they're not included in the calculation of debt they are fully transparent and the public is aware of the amounts, and that's my concern because even though the rating agencies currently don't include it in their imputations of debt, that number is publically disclosed so there are a number of counterparties whom we do transactions with who could look at them and say, you know, this is a large number and we infrastructure act do that so when we're doing a power trade with a Counterparty we look at their public company we look at their 10K and we look in their notes to see how many guarantees they have outstanding. If it's a 3 comma or a billion dollar number we get very concerned and we do in our own internal calculations include that as debt because that does in our opinion impact the creditworthiness of that entity.

MR. FREDRICHS: Okay. You mention--does anybody else want to make a comment? Because I don't want to--

FACILITATOR ANDERSON: I sense there's a lot of interest in questions and comments to be made here--does anybody object, we're currently in the scheduled break, does anybody object with us continuing to go through a question and answer comment making session on this topic?

(NO RESPONSE)

MR. WILLIAMS: I'd like to make a, kind of a philosophical question. I have two points I want to make. One is to the extent that you increasingly use parent company guarantees, there's in generally in life and in economics there's a law of unintended negative consequences and back in the 90s and early 2000's I used Dave Krause's data from Duff and Phelps and I think he said this morning and just on his table he showed that contributions, that's not how much you have in your fund, that's how much you've recently been adding to your fund, have been falling precipitously.

I think he said something like 15 years ago there were like 2 billion a year for all companies. Now it's down to, you know, 500 million and to the extent that you take away, extent that these guarantees come away to supplant having to put cash into your contributions I don't think that's probably a good idea, that's my opinion.

Second of all, it's been a while since I talked about these things. You were talking about 2% discount rate, if in when I built my models, I think what that implicitly means is you're, what NRC does is assumes that on average the rate of return on the funds, after tax, will be 2 percentage points above the cost escalation rates, I think that's what it was, and really--is that correct? Okay.

Really, that should be a variable. That should be a variable, and when I did my Monte Carlo analysis, you know, 5 years ago, of all the different companies, they can range from much higher than that to negative numbers. We don't know. It's an unknown, and to fix it at 2% as though that's gospel I think is misplaced. It's an unknown, it’s a variable.

I mean, actually I had the rate of return as a variable and I had the cost escalation rate as a variable so implicitly the difference is a variable as well, and so that's my two points. I just, there's the law of unintended negative consequences, getting back to the first part. It looks like these contributions are falling through the floor.

MR. LEVIN: Okay. I'd like to address both of those comments. On the first one, with respect to the contributions, the plants that we've ran shortfalls for this year have not been receiving contributions since the mid 2000 time frame. So we were above our funding minimums back in 2005, we dipped down during the period of 8 and 9, we're back up over them again. So you know, I understand that you have you know--we can only speak to--regarding the second item which is the 2% real rate of return, actually, I'd like to refer you to an OMB, Office Management and Budget circular, a94, which addresses the discount rates, supposed to be used for Federal construction projects, and in there I think you'll find that the real rate of return considered by he Federal Government for long-term project investment remains above 2% and has been well above 2% for the past 30 years. So, I think the 2% as a matter of fact is a relatively conservative view of the real rate of return that's available to any large asset or liability.

MR. HAYES: And just to add to that, for what it's worth, when we do our asset retirement obligation calculations that probability weighted discount, discount of cash, the model we use, discount rates, you know, that range from anywhere from four and a half to six and a half, 7%.

MR. ANDERSON: This is Rick Anderson with Dominion. Aaron, if I may jump in and help address this man's first question, as far as the rate of contributions dropping on an industry level. What that graph does not tell you is the fact that a number of sites have gotten license renewal, therefore they no longer had to have their continuing contributions because of the long return.

MS. SIMMONS: I have a question for Mister Hayes. First, a comment. I mean I think it's important to note that your company--you're a banker, you're very conservative, I'm sure, and your company expects you to be. In the same token, the public expects us to be conservative, so, you know, many of our assumptions are going to be on the conservative side.

I do have a question about your ARO calculations. You mentioned that, you know, under GAAP you're allowed to use net present value. How are you able to do that when both the cost of decommissioning and the timing of decommissioning are unpredictable? I'm just wondering what your approach is and how you do that.

MR. HAYES: It's an excellent question and I think I went through it rather swiftly and probably should have spent a bit more time doing it justice. If we brought one of our accounting team members they can certainly do a lot more justice to it but I'll just give you my own third grade understanding of it, but basically there are three ways in which we estimate that you can decommission a plant. Either via SAFSTOR where you have a 60 year extension, a traditional extension of 20 years, and a decon, which is the accelerated 7 to 10 years.

So, we take into account those three scenarios and probability weight them based on each commercial unit to determine which ones have the greatest likelihood of either having safstor, decon, or traditional extensions so we take into account those different scenarios, escalate the cash outflows associated with decommissioning based on those time periods, and then discount them back at various discount rates to to try reflect as best as we can economic reality.

FACILITATOR ANDERSON: For those that are listening--

MR. HAYES: --you're right, I'm sorry--you were right in your assumption, I am conservative in nature, but I am a recovering investment banker, so.

FACILITATOR ANDERSON: For those that are listening by phone, does anybody on the phone have a question or a comment?

(NO RESPONSE)

FACILITATOR ANDERSON: Are there any other questions or comments here in the NRC auditorium?

MR. SIPOS: Hi, this is John Sipos from the state of New York. I wanted to ask a question to Adam as a followup to a colloquy you were having with Sarah

Hofmann. In the end of your comment you were positing a situation in which if I understood you correctly there was something along the lines of a $700,000,000 shortfall if I heard you and you said that would raise eyebrows, I think within Exelon. Did I understand that correctly?

MR. LEVIN: No. My comment reflected the fact that rather than having let's say--we started out using a net present value for our shortfall incurred at the end of 2008, $31,000,000. We were by the NRC's view not covering that shortfall properly and they requested that we establish a guarantee of $219,000,000, 7 times the size. If for some reason or another, our net present value of our shortfall ran up to now $100,000,000, we'd be in the position again extrapolating that out to NRC's method of being 700 million, having face value of a guarantee, which would then, that certainly would raise some eyebrows, as I said.

MR. SIPOS: Followup question. Whether it was a $100,000,000 shortfall that you were looking at or whether it was using the NRC standards or projected up to $700,000,000, isn't that also a large obligation, a large risk that the states or that the host communities have to face, too?

I mean, it seems to me that again going back to sort of the larger themes, there seems to be a push by industry to shift the risk--I think we all understand there's risk, but why must the state of Vermont or the state of New York or a local town, why do they have to get stuck with that risk 20 years out, 40 years out, 90 years out?

MR. LEVIN: A couple of points of perspective here I think are important. The first is that when I said as an example we would be $100,000,000 short in decommissioning funds and therefore require the guarantee and that was the net present value amount, that also means that if I took $100,000,000 and deposited into the trust funds today I would be where I needed to be, okay? Also the second piece to this I understand is that $100,000,000 represents what is it, less than 2% of our total decommissioning assets that we have.

We have an asset total of 5.5 billion, so it's a relatively small piece. We are very comfortable using parent guarantees, we have no problem what that. What we do have a problem with is using a parent guarantee that's expressly written on a future value.

MR. SIPOS: Okay, well, coming back then to the larger parent guarantee question. Do you recognize or do you actually disagree that there are risks associated with that strategy if there were unfortunately to be a bankruptcy?

MR. LEVIN: I do not agree that there are risks, principally because and pointed it out here a little bit earlier, the NRC's assumption of a 2% real rate of return is a conservative assumption for a long-term liability of this nature. So, I do not consider it a risk and in fact I see that as we have plenty of margin even if there is for some period of shortfall in funds based upon market conditions.

MR. KELLER: Yes. Peter Keller, BNY Mellon. Just to highlight your point, I would agree, I think We're like number one as we've seen consolidation of ownership of nukes, we've got generally units controlled by bigger, more financially viable entities, and second line of protection, to your point, is that in most cases these NDTs are controlled, we happen to be the trustee for about 80% of the NDTs and there's a third party trustee so in the event of an Exelon bankruptcy, Exelon is not controlling those funds so I do think the public, I don't think the citizens of the state of New York are particularly exposed to liability.

MS. HOFMANN: But now I'm going to address to my fellow audience member--Sarah Hofmann, Vermont. But the parental guarantees aren't placed in the decommissioning trust funds, unless I'm wrong.

PARTICIPANT: No, they're not.

MS. HOFMANN: Okay.

FACILITATOR ANDERSON: Bret, could we please hand the microphone to that gentleman, make sure we get that last comment that was said on the record? Sir, could you please repeat what you just said into the microphone?

MR. KELLER: Yes, my only comment to Sarah was that the parent guarantees address a shorter term shortfall, not the base obligation of decommissioning.

FACILITATOR ANDERSON: Thank you. I sense that there are probably more questions and more comments on this particular topic. We are currently over time. There's still one more presentation that we have on the agenda for today. Here's what I would propose we do.

I propose that any additional comments or questions that we have on this topic, that we carry those over to the general Q&A and wrap-up that's at the end of the agenda, and if everyone could agree, let's also condense the afternoon break and make it a

7 minute break.

Would everybody agree to take a seven minute break, be back in this room at 3:30, or at least, 3:30 on the clocks that are in this room? We'll have the final presentation and then move into the final Q&A. Thank you.

(Whereupon, the meeting went off the record at 3:25 p.m. and resumed at 3:32 p.m.)

FACILITATOR ANDERSON: I'll repeat for the record that I welcome everybody back from the break, and I appreciate your patience and flexibility in deferring some of these questions until after the final presentation, and taking a shorter break in an attempt to keep us on schedule.

The final presentation that we have for today, before we move to the final wrap-up and Q&A session is from NEI.

MS. KASS: Great. Thank you. I'm Leslie Kass with NEI. We represent the nuclear energy industry, with over 300 members that include all of the operators of the 104 reactors in the United States that are operating, and many of those who are also in decommissioning status.

So I welcome the opportunity to speak to you here today on behalf of my members. I hope I'm your favorite speaker, because I hope I'm your fastest speaker. And we will skip through -- see, I'm already getting applause -- a lot of these slides.

But something that was said in track two, but may not have been said in this room today, is that we'd like to congratulate the NRC on their regulatory framework for decommissioning funding assurance.

Because in the worst financial crisis in 75 years in this nation, the worst since the Great Depression, it withstood the markets, and 75 percent of the licensees were still fully funded.

Of those, there were 27 that had shortfalls, and in under a year 21 of them were already back at full funding. So as we mentioned earlier, the two percent rate of return is very conservative. Many of the rules are very conservative.

But they have worked, and they've provided the flexibility to create assurance through the years. So bravo on a job well done.

With that, we're here today to talk about the methodology for the parent company guarantee. The parent company guarantee is one of the methods that is allowed, and in that we are now talking about the semantics of how to implement it, and a proposed change from the staff from what's been done in the past.

Next slide, please. So the industry position, if you haven't figured it out already from my comments and those of my colleagues, is of course that we should retain the net present value method, that the parent company guarantee using a net present value method, with the annual true-up so that it can be checked, will keep pace with inflation because of that annual check.

And that because of the financial test, it makes what would seem to be of small incremental value more magnified. And therefore, as my colleague Mr. Hayes said, very greatly overstates the liability, and can create problems for us in financial space in a much bigger picture than just our operating plant and our decommissioning fund.

Next slide. We can skip this one. You've already heard all about it. Next one. Again, skip. Skip. I think Tom covered this well for me. Obviously, as we mentioned, we view this as a change to go to what we call the future value approach, and we feel that those past precedents have been implemented successfully

And those licensees continue, through the biennial reports, to either meet or make up for their shortfalls as they go forward, and make sure that they are all covering their obligations for financial assurance.

Next. By example -- and I think you've seen these before. Tom kind of flashed it up. But I'd like to walk through the math one more time, because until you've wrapped your head around it, what we're talking about doesn't really make sense until you run some numbers.

So operating reactors. Let's say I have an operating reactor with 100 million dollar shortfall. I picked that number because it's round and easy to use. Actually, most of them were far, far less when we had that unfortunate and surprising situation that has now corrected itself.

Under the proposed staff method, that guarantee would need to be 181 million if that reactor were scheduled to decommission in the 2040 timeframe. So multiply that by six, and you get over 1,000,000,000 dollars for that liability in the parent company guarantee.

In comparison, if you multiply what we feel the present value -- the liability -- times six, it would be 600 million, a 486 million dollar delta between the two.

Again, that 486 million dollars is a real number for anyone. I know we're here in Washington, where we throw billions around, but that's a real number, and that's a real number on a company balance sheet.

And again, it may not be on the balance sheet, but a real number to be on the list of liabilities that are hanging out there.

Next slide, please. Approach two. Again, a new reactor. Why is this so important? Well, new reactors, when you're finding all your money for funding and building and everything else, it's nice to use a parent company guarantee to bridge that gap. And you can start using some operating revenues to fill the fund.

But you would have a guarantee. Obviously, someone who isn't in a financially good place is not going to be able to build a reactor in the first place, but we'll take the full value of the 466 million dollar liability.

Again, if you discount that back, it would be 198 million. So we would say the parent company guarantee of 198 million times six, which is still a big number. It's over 1,000,000,000 dollars.

But in this case you'd say "Nope, you need the full 466 million." I multiply that out, and suddenly the net worth test balloons to 2.8 billion dollars, or a 1.6 billion dollar difference.

Again, those are real numbers that any utility in this country would have to pay attention to, and that any of their counter-parties -- it would certainly catch their attention.

Next slide, please. So, given that, and the discussion here today, again we feel that there is a negative impact to the future value approach.

We also believe, more importantly, that the net present value approach correctly characterizes the liability, and captures that, and ensures that as a short-term measure we can use that to move forward.

So with that, I will entertain questions. And as you have questions for my colleagues from earlier -- I certainly can't replace Mr. Hayes' expertise and experience -- I will liberally point them right to him.

FACILITATOR ANDERSON: Thank you, Leslie. Actually, if I knew that you were going to speed us up that much, we would have taken an eight minute break instead of a seven minute break.

MS. KASS: They'll be happy to leave.

FACILITATOR ANDERSON: Anybody have any questions or comments here at NRC headquarters for Leslie?

MR. FREDRICHS: Well, thanks for coming, Leslie. Once again, I'm really thrilled that we drew so many professionals from the industry and financial sector to help us address some of these problems.

And I've heard a lot of comments about the quality of the presentations today, and that of course is an accolade for the people who are doing the presenting. So thank you for that.

I really only have one small comment on your slides, and that is that in one of the spots, you talked about how many dollars of secured assets would be needed to qualify for the parent company guarantee. That's as good a slide as any -- and the last 486 million in secured assets.

I was trying to make it clear that from the NRC's point of view, there are no restrictions on the assets. You have to possess them. We don't restrict their use in any way. We don't require them as security or anything like that. Just to clarify that small point

MS. KASS: Thank you.

FACILITATOR ANDERSON: Any other questions or comments here at NRC headquarters?

MR. HORIN: Bill Horin, with Winston and Strawn. Not a question, but a comment. One of the other areas that I like to dabble in is backfitting. And I just want to provide a comment with respect to some of the earlier slides, I think they were in Tom's slides, with respect to the interpretation of 50.75(b), (c), and (e).

It is a change in position. It is a new approach that the staff has proposed. Those particular regulations don't preclude what we're talking about here.

And I think it is a backfit, and I think it will need to be addressed in that context. I don't think it's an error, personally, and I don't think the industry would suggest that it's an error that we went through three proceedings in which that was applied.

But I just want to make sure we have that on the record, that there's not concurrence with that position at this point.

FACILITATOR ANDERSON: Thank you for that comment.

MS. SIMMONS: This is Anneliese Simmons again. I was just curious because there was some discussion here about new reactors.

On my notice, there was that similar discussion in the Exelon presentation, and I'm wondering if Exelon's planning to build a new reactor.

FACILITATOR ANDERSON: I am going to ask Reijji to speak into the microphone to get that on the record.

MR. HAYES: Okay, so to be clear, the question is whether Exelon is contemplating new nuclear build. We often contemplate such things, but at the moment there are no plans to build a nuclear facility.

And that's consistent with what John Rowe, our CEO, has said publically. One of the reasons is it's very expensive. But obviously, some of these costs as well make it cost-prohibitive.

MS. KASS: And it would be fair to say that they do have an early site permit pending, such that if they choose to build, they'll be in a great position. As one of our big operators, we would of course love to see them have a new reactor someday.

MR. KELLER: Peter Keller again. And again, not a question but a comment, sort of to Leslie's point and Reijji's point.

I run our energy group, and we probably have about 6 billion dollars of credit exposure to most of the big publically traded IOUs, investor-owned utilities.

And I know you don't restrict funds, Tom, but the reality is -- and to Reijji's point earlier -- we're all certainly very cognizant of the contingent liabilities on the balance sheets of all of our big credit customers. And there are, if not direct costs, there certainly are intangible costs.

And a couple years ago, when natural gas prices spiked and people needed additional credit capacity for counter-party postings, certainly any of the utilities, had they needed to issue LCs or provide additional support at a time when gas prices were 14 bucks an MCF, they would have had real capacity constraints.

FACILITATOR ANDERSON: Are there any other questions or comments for Leslie here in the NRC auditorium?

MS. HOFMANN: Sarah Hofmann, State of Vermont. It's come up a few times on the collateral, and how companies such as Exelon consider the parental guarantees as debt, and they believe that other companies do as well.

If instead of doing a parental guarantee, you just put the money into the decommissioning trust funds, the actual decommissioning trust funds, is it then -- it's not considered a debt any longer. Is that correct?

MS. KASS: Well, I can let --

MR. LEVIN: This is Adam Levin at Exelon, just to put it a little bit in perspective. We are hesitant to make cash contributions to the trust funds.

And the reason being is that there's a law in the State of Illinois that says at the end of decommissioning, the money goes back to the ratepayers. So if we are overfunded, we lose it.

MR. HAYES: The only point I would add is that from a cost of capital standpoint -- and this is going down to the realm of the theoretical, or corporate finance theory.

But if we took -- view our cash as quite expensive. So I showed you a chart that showed a variety of letter of credit costs, from 150 basis points to 400 basis points.

But in the event we use cash to fund that obligation, we ascribe a cost of equity or a cost of cash of 10 to 12 percent, or even higher. Because we view that as shareholders' cash.

And so if we use it or we deploy it, we

want to deploy it in investments that yield a return higher than that. It's very expensive capital.

MR. LEVIN: If I could just clarify one thing a little bit. What we're really trying to avoid by putting up parent guarantees during points in time when the financial markets may not be 100 percent in our favor is grossly overfunding a liability. That's really what we're trying to do.

And we try and do that in any organization. I'm sure you try and do that personally. You want to save money for your child's college education. You want to make sure that you give them enough, but not so much that it damages your retirement.

So I think there's -- from a business perspective, it's something that we do do pay attention to.

FACILITATOR ANDERSON: Any other questions or comments here?

MR. FREDRICHS: Thank you. It's interesting here that the State of Illinois would take any excess funds if there were any in the trust fund. But as for the cost of capital within the company, the Commission thought about that, considered it in a 1988 rule when it first put in place the financial assurance rules.

The original proposal was that an internal reserve in the company might serve as financial assurance, and the Commission reversed -- we rejected that idea in the final rule, because there was a concern that the internal reserve might not be available when needed.

And even though the Commission recognized at the time that putting money in an external trust was more expensive than keeping the money in the company and using it in the business, they determined that the cost was justified because we needed the amount of assurance for public health and safety at decommissioning.

So we haven't talked about it much, but one of the alternatives to a parent company guarantee is, of course, put the money in the trust fund. Which gets to the goal, really, that the funds will be available when the unit is shut down.

And what we've seen in a number of cases is since 1998, when the rule no longer required licensees to put money in a trust fund, those deposits have stopped in many cases.

If the rates -- once they went to merchant plant status, it appears that in many cases the trust fund amounts stopped. And that worked okay during the middle part of the last decade, because the stock market was doing so well.

But while you're concerned about being grossly overfunded, as a regulator we're concerned about you not being funded adequately in the first place.

And I think what we're seeing -- with these market downturns, more licensees are starting to have shortfalls. They're taking longer to resolve them. And it's an indication that you're starting to skate closer to the edge.

And while that may be more economically efficient, and understandable from a private industry point of view, from a regulator's point of view we believe that there's a certain cost of this that's justified to protect the public.

MS. KASS: Tom, to that comment, again on behalf of my members, I think that the economic downturn was, hopefully for all of us, an event in isolation, and a very extreme event that drove many of these funds to have shortfalls.

Again, I've pointed out that 21 of 27 recovered in a year, no actions taken. Exelon has indicated that they will no longer need their parent company guarantees, and they were one of the ones most affected by this.

So I have a hard time seeing where there is a behavior pattern here, rather than a market issue here. And again, parent company guarantees are allowed by the rules. They do provide that short-term funding.

As these guys mentioned, in the midst of a financial crisis, getting money in any form, letter of credit or cash, is three times as expensive, and actually doesn't make sense. And that's why we called out some of the dispensations given for pension plans, for instance by Congress, when they realized that it would be crippling to companies in the midst of a financial crisis to have to go and true those up, given the rules.

So we didn't ask for any special dispensation. We just wanted the rules to work as they are. And notice they've been very successful, as I pointed out in the beginning. So I guess I have a hard time seeing where there's a new problem that has cropped up as you've described.

MR. FREDRICHS: If I can comment on that, you can also think of decommissioning funding as a sort of a retirement plan. And I think the advice is always to put money aside steadily over a period of time, and eventually you will meet your goals.

What we're seeing in some cases is that the money is not being put aside, and so when financial shocks come through it's more likely to affect those.

Having said that, it may also be that they'll recover but maybe --

MS. KASS: Tom, to that --

MR. FREDRICHS: I'm just saying --

MS. KASS: Has anybody not met their minimum assurance values through one of the vehicles that the NRC allows?

MR. FREDRICHS: Yes, they have done that. And it may be more accurate not to say that they did nothing. Actually, many of them did do things. They depended somewhat on markets coming back, but in a number of cases there were SAFSTOR evaluations.

But what it shows is that in order to meet the funding, they are now depending on more and more years in the future and after they shut down.

MS. KASS: But those are allowed by regulation, those methods.

MR. FREDRICHS: They're allowed by regulation. I'm only suggesting that funding in the utility days did not need to depend on that sort of thing. And that's partly because the utilities were putting money aside, year after year, slowly building it up. But that's all I really wanted to say on that.

MS. KASS: I guess the other thing is just the cost of stranded capital, that once it is in that fund, you may never take it out. So when you are overfunded, that's not an effective use of corporate funds, of ratepayer funds.

You will find a tremendous push-back in some states from the ratepayers who do not want to overfund that liability, because they feel as ratepayers, the people paying for power, that that is not a good use of their money.

So while I can understand, and we would all love to just have extra money to throw in there, these folks are looking at a much bigger picture, and what is the best place for their capital. So as long as they're meeting the NRC requirements, they may have other things they choose to do.

MS. BALLENGER: Josie Ballenger from the Government Accountability Office. I just wanted to follow up on what Mr. Levin shared with us about Illinois and the state law there about excess decommissioning funds.

I'm curious if NEI or any of the other companies in the room know of other states where such a law exists. And if so, is that a significant concern for the industry or other specific companies?

MS. KASS: I cannot speak to whether there are other similar laws. There are certainly various quirks in various states. What I will say is, generally speaking, overfunding as a use of assets is not considered -- or overstating a liability and/or overfunding a liability is not considered good accounting practices by our members. Period.

MS. HOFMANN: Yes, and the only reason I suggested it was, do you want parental guarantees or do you want to fund the fund and not have it count as a debt.

But as to your question, Vermont actually has a unique situation that I'm sure Jaeger next to you is aware of. But if there is an overfunding in Vermont of the decommissioning fund, there is a split, that part of it goes back to the ratepayers and part of it goes back to the utility. It's about 50/50, but not quite. I think it's 55/45.

MR. KELLER: And I think, conceptually, in most states there's a differentiation between plants in merchant mode and plants that are on a rate base.

So conceptually, if the ratepayers have paid for something, the thought of them getting it back makes some sense.

But back to the earlier point. I don't think there's been a fundamental shift in the way that any of our clients handle decommissioning. We always try to estimate what the final tab is going to be, and then look at how many years you've got to build up investment earnings.

So I would reject the suggestion that utilities are funding in a different mode. Certainly adding 20 years to the lifespan allows you to -- if you assume that you're growing to grow assets quicker than liabilities, I assume you should cut back your funding. But conceptually, the concept of trying to match obligations to assets, I think, is unchanged.

MR. LEVIN: Adam Levin, Exelon Generation. I think one other quick point that I did want to bring up is that NRC traditionally has frowned if we were to overfund our funds, because we are in a situation where we were underfunded because of financial markets.

NRC has traditionally frowned on us going in and recovering some of those funds, even if we were above minimum funding requirements. So we risk NRC's point that they do not want us to withdraw, even if we are overfunded.

FACILITATOR ANDERSON: Back to the folks on the phone. Are there any questions or comments on the telephone related to Leslie's presentation?

(No response)

MR. SMITH: Jaeger Smith for Entergy. Further, to Adam's point, I think that the decommissioning trust instruments themselves will probably generally preclude any withdrawals. That's my view of it, is that in most instances it would be very difficult to get the money out of the trust if you'd put it in there.

And then if you put the money in and you get a license renewal, like we're anticipating getting on several of our plants, you've tied up money for who knows how long and inter-generational problems arise.

And I think I want to correct the record on something I said earlier. I may have said we had one parental guarantee, but I think we have two. So the record stands corrected.

MR. HORIN: Bill Horin, Winston and Strawn. It's not only the trust agreement, but for qualified funds it's the IRS and the NRC regulations with prohibit withdrawal of funds other than for planning and actual decommissioning.

They all prohibit taking the money out once you've put it in. So to the extent that somebody may thing "If we put it in, that's no big deal," it does raise the issue of once it's in, it's not coming back out.

So we have the inter-generational issues. We have the transfer at the end of decommissioning issues. And we have the considerations of the proper use of capital.

FACILITATOR ANDERSON: Are there any other questions or comments here at NRC?

MR. WILLIAMS: Yes. I am quite interested in what the Exelon representatives have -- one thing they said, with the merchant plants, nowadays when you sell electricity, I guess if I understood you correctly, that the ratepayers aren't explicitly paying a cost for the decommissioning, and that it basically just comes out of Exelon's profits, so to speak. Is that correct?

Because in the past -- I mean, whose money is it? Basically, if in fact the rate -- in the past, if ratepayers put that in, it's their money. Now you have intergenerational things, you should -- conceptually, if everything were perfect, I would suggest that each person's use of electricity should include in its price the present value of that portion's future decommissioning cost.

But that's an ideal world. You're going to have to make it up at the end. But let's say you got overfunded in the end. Then it would depend on whose money that was. Because implicitly, you're charging that accrued cost, because that's part of the price.

Implicitly. But if you don't make it explicit, you can't say how much the ratepayers put in. So I guess things have changed. Is that correct?

MR. LEVIN: Adam Levin, Exelon. In 2000, when we formed Exelon Corporation, we came to an agreement with the State of Illinois that we would collect a future series of payments from ratepayers for decommissioning funding through 2006.

Beyond that, those payments were terminated. Since then, we have -- and we agreed with the Illinois Commerce Commission that including those payments plus what was in the corpus of the funds, we would have sufficient funds to do the decommissioning.

Part of that agreement was that at the end of decommissioning, if there were funds left over, they would be returned to ratepayers. That's the agreement that we set with the state when we formed Exelon Corporation.

There are no additional funds being contributed to those trust funds. We collectively -- and when I say we collectively, the stakeholders at the table in the 2000 agreement collectively agreed that looking forward, long-term, there was going to be sufficient funding.

This is what we decided upon, and I still have every reason to believe that. Even with the downturn in the markets, the recovery has shown me that that can indeed happen.

MR. BAILEY: Many of the arguments in your presentation would appear to apply equally to letters of credit and and surety bonds. Would the association be advocating that letters of credit and surety bonds be set at a discounted present value amount? And if not, how do you distinguish?

MS. KASS: They are. They already are. This is the only one that's an outlier. There appears to be an an inherent penalty being applied to parent company guarantees versus these others.

MR. BAILEY: I don't think that's correct, but I guess we have a divergent viewpoint. Okay, thank you.

MS. KASS: And that is the goodness of a workshop, right?

MR. SIPOS: Right, there's been a -- John Sipos from the State of New York. Thanks for reminding me about that. There's been a lot of discussion in the last few minutes about the fear or risks of overfinancing these accounts. But again, and it will be a theme from the State of New York, there is definitely a risk to the states and to the host communities.

And I just am going through a letter from a company, ZionSolutions. It's ML103280376, from November 23rd, 2010. And maybe this has been superseded, but it does say in here "The schedule is being updated in accordance with 10 CFR 50.82 et cetera to reflect a two year delay in the start of the project, which is associated with fluctuations in the value of ZNPS decommissioning trust funds that began in 2008."

So I certainly understand, and I respect NEI's position that everything has been trued up and that there's a concern about overfunding. I do think that there are real world consequences for the fluctuations that we have seen.

And even apart from the fluctuations that the nation has experienced in the last two years, the State of New York is concerned that the present business as usual in terms of the decommissioning trust funds and their formula is not going to be adequate, and is concerned that merchant plants -- that there are situations where merchant plants have not been making modest contributions over time.

And we would suggest that rather than the concern of overfunding, that there is going to be a concern of underfunding, and that will also be an inter-generational issue that we'll have to address down the road.

And again, as I said this morning, the states do not want to be in a position where they're forced between using scarce funds -- and we all know, right now states have scarce funds -- to clean up a site where a merchant company has walked away from it down the road. Thanks.

MS. KASS: I think we in the industry appreciate your concern. That's why we fully participate in this process, and follow the regulations. There is the the biennial true-up.

We're also forced to look every year, and you have not only the backstop of the NRC -- which you can see here, they are very, very engaged -- but also, these are liabilities on our balance sheets as plants, if there were a plant retirement, things like that.

So these plants are certainly an integral part of our business, and something that we manage in concert with the counties and cities and states in which we operate, and would hope that all of our member companies are working with you.

And as they approach decommissioning they'll be working with the communities to make sure they understand that process, make sure they're involved and engaged, and that we can work through this together.

MR. LEVIN: Adam Levin, Exelon Generation. In response to the State of New York's comments regarding the letter from ZionSolutions in November of this year.

That letter was issued -- and again, I'm familiar with the circumstances as to why that letter was issued. I'm not the licensee, but part of the transaction with ZionSolutions.

In the 2008 timeframe, when ZionSolutions was prepared to enter into the transaction with Exelon Generation to tranfer the unit to ZS, we had looked at the decommissioning funding and the status of the decommissioning funding.

Also, one should understand that at that point in time, that's contemplating in reality beginning to decommission the units and completing decommissioning 12 years in advance of when Exelon was planning to decommission the plant.

So it's not as if we ended up delaying. We had substantially accelerated decommissioning in the first place. And yes, we made a decision to delay entering into that transaction for two years. It was not just the trust funds. It was also the availability of certain credit instruments, et cetera.

We collectively agreed that we would put it aside for a little while until we had a higher level of confidence that these trust funds would support us all the way through, and support a 10 year in advance early decommissioning, which is where we are today.

MR. FREDRICHS: It's Tom Fredrichs, from NRC. And I had a couple of things I'd like to talk to the Exelon representatives about, or comment on them. Although one of them, on the concept of overfunding, is actually used by many licensees.

In the NRC's understanding, a trust fund is fully funded when it equals the decommissioning cost estimate. In many cases, when licensees talk about overfunding, they mean it will be overfunded at some point in time when enough earnings have been collected.

So just to make that point, generally speaking the trust funds aren't overfunded, because they haven't met the minimum requirement. We would say, perhaps, they are over-assured, but they are not overfunded.

The other thing is on ZionSolutions, now that you mention it. As I understand, when Exelon made the transfer, the financial arrangements included a parent company guarantee from Entergy Solutions, who is the parent of ZionSolutions.

And as I understand it, that parent company guarantee is to pay for any cost overruns that may occur with ZionSolutions, and there is no limit on it. So in my view, at least, when Exelon is the regulator of its counter-party, it's actually more stringent with a parent company than the NRC would be with one of its own licensees.

MR. LEVIN: Adam Levin, Exelon Generation. In fact, we do not have a parent company guarantee in place. What we did require as part of the transaction is that Entergy Solutions put in place a 200 million dollar letter of credit, and that's recorded on the transfer.

Again, the concept behind that is just additional insurance that we at Exelon felt we needed to have in order to convince all of our parties that we were in good shape to go forward. We have no expectation that that letter of credit is going to be used in any way, shape, or form

And in fact, if anything, I would expect them to eat into their profits a little bit before they finished the job completely. So while there is this spectre out there that we required a parent guarantee, that is not the case.

MR. HAYES: I just wanted to -- Reijji Hayes, Exelon Corporation. I just wanted to emphasize the last point I think you made, Tom, around us being stringent around -- as Adam mentioned, there was not a parent guarantee put in place for the Zion situation.

However, as I mentioned, we are stringent when we assess guarantees of third parties for energy trading transactions, which is why -- it's frankly the crux of my argument, which is why we do not want to cavalierly use a future value methodology and increase our guarantees to a large amount.

Because I think one of the points in your presentation was that parent guarantees don't cost anything. There are no direct costs, so why aren't corporations or licensees agnostic about them?

Well, we're not agnostic about them for that very reason. It's the fact that, though they don't have direct costs, there are a number of indirect costs, meaning that counter-parties do assess them, and in most cases, like us, likely view them as debt.

And also, the rating agencies, though they historically have not included them in their total debt calculations, there's no guarantee that they may not in the future. They have changed their position on a number of other off-balance sheet liabilities in the past several months, particularly post-credit crisis.

They've gotten much more stringent, namely in the treatment of convertible securities and a number of other off-balance sheet liabilities that, in the past, they had not included in total debt calculations.

So I just wanted to make the point that we agree that we are very stringent about guarantees, which is why we don't want to overstate the shortfall, and which is why we don't want to issue guarantees at an exorbitant amount, because they do mean a lot to us.

MR. WILLIAMS: Dan Williams, consultant. I would like to interject maybe a little bit of realism into this conversation about the worries about overfunding.

I remember Chairman Greenspan in the late '90s, he was worried about if these surpluses in our federal budget continue, we're going to run out of Treasury Bills and bonds, and therefore we won't be able to engage in monetary policy. I wonder how that worked out.

And so you know, just "Whoops, we're overfunded for a little bit." Let's see how that works out. I mean, it's so easy to underfund things. You look at Wisconsin, and I remember about a year ago they were talking about the state budget, and the requirements to fund the state pensions, same thing as in California.

The real worry is, in the long term, I think -- just don't get too hung up on overfunding, because I think the real worry is underfunding in the long run. I mean, obviously companies would rather spend less than more, but I just wanted to inject that.

Don't worry so much about overfunding,

because I think that's a a red herring. I remember thinking when Greenspan was going on about this, I was thinking "You've got to be kidding." And sure enough, you've got to be kidding.

FACILITATOR ANDERSON: With one eye on the clock here, I want to make sure that we save 10 minutes for wrap-up and just closure by the NRC staff. What I'd like to do is give ourselves another 10 minutes more if we need it, but I want to try and make sure that we're headed towards concluding the meeting on time.

So what I'd like to do, over the next 10 minutes, I'd like to open the floor to comments or questions, not just to Leslie's NEI presentation, but even the Exelon presentation right before the break, or any presentation, any comments or questions related to anything from the workshop today.

Let's give ourselves 10 minutes to do that before we start to wrap up.

MR. FREDRICHS: If I can ask Adam or Reijji -- I may have asked this earlier, but I'm not sure what the answer was. But as far as the 219 million dollars in parent company guarantees that you had in place, or may have in place even today, did Exelon actually experience any of the indirect costs that were brought up in earlier NEI comments from last year, restrictions on your liquidity, or credit stress or credit downgradings?

MR. HAYES: The quick answer is no, we did not experience any indirect costs for the 219 million. I think, though we agree for the methodology that was used to calculate the 219, that's not a number that bothers us as much.

What does bother us is in aggregate, the 219 plus other guarantees we owe outstanding. We currently have just under 1,000,000,000, and so we do get concerned if that number gets high, that some people will take it into account. Third parties, rating agencies, you name it.

So the 219 in isolation, no. That didn't really ruffle many feathers. But we're worried if that number escalates, or if there are other numbers, other amounts that are added to it, that could be a problem over time.

MS. KASS: Question for Reijji. Would it be fair to say, though, that the act of putting the guarantee in place created a lot of work at Exelon?

MR. HAYES: Without question. It was at least a -- what was that, a four to five month ordeal internally? The process took us at least six months.

We needed Board approval, and had to go to the highest levels of the company.

So it was, from an administrative standpoint, a significant burden, and there was a lot of back and forth. So yes, it was a long and arduous process, relatively speaking.

FACILITATOR ANDERSON: Are there any questions or comments from those that are still on the phone?

(No response)

MR. KELLER: Yes, it's Peter Keller, from BNY Mellon one more time. Dan, to your comment about how it's a red herring, people shouldn't worry about being overfunded, I think you've got to keep in mind the number of plants that are rate-regulated.

And you look at Illinois a couple of years ago, you look at Florida. And these are costs that get passed through to consumers, and regulatory push-back is a real concern that, as a banker, I have about the cashflow of my utility clients.

And when you sit and say "What's the downside of overfunding?" The downside is higher electric rates, and we all know how contentious this regulatory process, the rate-setting process, has been in a number of states over the last couple of years.

FACILITATOR ANDERSON: Any other comments or questions in the auditorium here at NRC headquarters?

(No response)

FACILITATOR ANDERSON: Thank you, Leslie. So what we'll do then is, we'll move into the wrap-up session and the closure of the meeting. One last call for any comments or questions related to anything discussed in the workshop today, either on the phone or here in the NRC headquarters auditorium.

MR. FREDRICHS: I think Reijji used a mortgage example earlier to express a sort of anecdotal understanding of the NRC position on the parent company guarantee.

And I think he wound up concluding that the guarantee would be much larger than you might expect. I also have a mortgage example, which characterizes anecdotally the way I understand the proposal.

And that is if you have a mortgate -- let's call it a a 40-year mortgage, like the license. And you make -- I'll just pick a number. Four thousand dollars a month, or something.

I see the parent company guarantee as going to the bank and saying "In lieu of giving you a check for 4,000 dollars every month, I'll give you a guarantee for 4,000 dollars every month. And at the end of the 40 years, they'll add up to the purchase price plus the interest on the house. And I'll give it to you then."

That's the way we look at it.

FACILITATOR ANDERSON: I'll look to see if Reijji or Adam wants to respond. No pressure, no requirement.

MR. LEVIN: No pressure, no requirement. This is Adam Levin at Exelon. No, I'm not sure I agree with that analogy. Because what you're asking for is -- it would be very simple if I were to be in a position of depositing or putting up a parent guarantee that increased an amount of 4,000 dollars every month, that I had to do it for the purpose of decommissioning.

What, in reality, NRC's asking for, is that I put in the total amount right up front. In other words, parent guarantee my mortgage.

MR. FREDRICHS: Well, I am suggesting that the discounted parent guarantee would be some small amount which would build up over time, which I think is your position.

But anyway, since it's late, I'm not going to make any more comments so I don't stimulate any more discussion. Although we've had a lot of discussion, and I'm really impressed.

And I would like to folow up with Reijji at some point in the future, because I don't understand how these guarantees work in your futures, your energy trading.

It might help me if I did, so if you don't mind, I'd like to give you a call at some time in the future to learn more about that. But I don't know, is it time to wrap up?

FACILITATOR ANDERSON: So with that, what we'd like to do is just do a quick wrap-up here. As a reminder, this workshop was one way to provide comments and ask questions related to decommissioning funding.

There are other avenues that are available. The slide that's on the screen provides various deadlines associated with comment periods, and also a mailing address and an email address for written comments to be provided.

So I would encourage anyone that did not have a chance to provide their comments today or thinks of additional comments to provide after this meeting to please utilize those resources to provide comments to the NRC staff afterwards.

And on behalf of the NRC staff, I'd like to thank everyone that participated here today. The presenters, those that provided comments, those that asked questions, and even those that just took the time to either dial in and listen or come here in person and listen.

Public outreach and getting comments like this is an important part of the NRC's mission, and the burdensome use of microphones in order to get a clean transcript is something that works, unfortunately, very well for us to get those comments. And I appreciate everybody's patience and flexibility in working through our process to make sure that your comments are all recorded and available for staff disposition later on.

With that, thank you all again for your time and attendance. This meeting is adjourned.

(Whereupon, the above-entitled meeting was adjourned at 4:21 p.m.)