UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF

NEW REACTOR ISSUES - PART I

MORNING SESSION

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ROCKVILLE, MARYLAND

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MONDAY, NOVEMBER 21, 2005

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The Commission met in open session at 9:30 a.m., at the Nuclear Regulatory Commission, One White Flint North, Rockville, Maryland, the Honorable Nils Diaz, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

NILS J. DIAZ	Chairman of the Commission
EDWARD MCGAFFIGAN, JR.	Member of the Commission
JEFFREY S. MERRIFIELD	Member of the Commission
GREGORY B. JACZKO	Member of the Commission
PETER B. LYONS	Member of the Commission

(This transcript was produced from electronic caption media and audio and video media provided by the Nuclear Regulatory Commission.)

STAFF AND PRESENTERS:

H.B. BARRON, CNO, Duke Energy

J.B. BEASLEY, CHR., PRES. and CEO, Southern Nuclear

MARILYN KRAY, PRESIDENT, NuStart Energy

EUGENE GRECHECK, VP Nuclear Support Serv, Dominion

RANDY HUTCHISON, SR. VP, Entergy

SCOTTIE HINNANT, SR. VP and CNO, Progress Energy

RAY GANTHNER, SR. VP, Framatome ANP

STEVE HUCIK, NEW PLANT LICENSING MGR., General Electric

DANIEL S. LIPMAN, SR. VP, Westinghouse

JAMES ASSELSTINE, MANAGING DIR., Lehman Brothers

P R O C E E D I N G S

CHAIRMAN DIAZ: Thank you to our panelists for joining us today. It is a pleasure to have you here with us as we all -- and I think "all" might be the right word to use -- are trying to increase the predictability of the new licensing processes and the predictability of how the industry and the agency deal with the potential for new reactors.

We do appreciate having you here today to provide us with your views and the way you see some of the issues and the times in the schedules. We continue to be concerned of the speed at which many of the things are developing.

Like I said in INPO and I think my fellow Commissioners agree, that the agency is getting ready to do the very best it can to address every one of these issues and in a manner that provides for assurance of public health and safety and that will meet the schedules.

To do that, we need you to also do your share, because this is one of those cases. And we cannot go our job very well without you guys doing your job very well.

With those few introductory remarks, I will ask my fellow Commissioners --

COMMISSIONER MC GAFFIGAN: Mr. Chairman, I think today's meetings are a very important milestone for us.

I do want to reinforce the comments that you made at the INPO meeting.

You and I and the rest of the Commission testified earlier this year before the Environment and Public Works Committee. And I remember Senator Obama asking whether we can handle dozens of applications or whatever it is that are coming our way these days. And

we said no. And nothing much has changed.

We were hoping at one point that we would get sort of two or three high quality applications referencing certified designs and referencing early site permits. In which case, I think this is a schedule we might be able to adhere to. That's not what we are going to get.

We are going to get things that are slapped together on short notice, not dealing with certified designs, not dealing with early site permits, some even perhaps dealing with green fields.

And there is no schedule for those. There is no schedule for that sort of application.

The long pole in the tent will be the design certification, which typically takes four or five years. And I don't know how to shorten that.

So if you have a COL application that -- I guess you can include the design, that isn't going to speed anything up.

So there's a lot of -- I see in the trade press you all are telling Wall Street what you think our schedule should be. We have to follow a schedule that covers all the basis. That covers the environmental concerns that we hoped would be handled in a early site permit, cover the safety concerns that we plan to deal with in the combined construction and operating license, handle the design concerns that we hope to handle in a design certification.

And I think that you as an industry and we as a regulator would have been better off had we had two or three high quality applications and then, build from there as we did in license renewal.

In license renewal, we had Oconee and we had Calvert Cliffs. We worked through them. We issued a GALL report, then we dealt with the tidal wave.

Here, we are dealing with the tidal wave first, and I don't know that that's the best public policy. But we will in de facto end up having to sort out who's first and who's second. As I think the Chairman said at INPO, it is not who gets in first, it is who gets through first.

And you know, depending on all these circumstances, whether you have an ESP, whether you have a certified design, whether you have both, which apparently is going to be an all set, you will get through the process quicker. The quality of your application will get you through the process quicker.

But we're not going to have our schedules written by your public affairs people talking to Wall Street.

Thank you, Mr. Chairman.

CHAIRMAN DIAZ: Thank you, Commissioner McGaffigan.

Commissioner Merrifield.

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.

I certainly would join my fellow members of the Commission in stressing the importance of the meeting. I think it is very useful that we are having an opportunity to have some dialogue today about where we go from here.

I think there is, as Commissioner McGaffigan has stated, there are some pluses and minuses about where we are right now.

When I first got on the Commission back seven years ago, I think there was conceptualize, even though we were not at a point then as we are today where we have the possibility of imminent orders.

There was some expectation that we would have a smooth process that would go from an early site permit combined with an improved design certification merging into a combined operating license application. It would all sort of smoothly ramp up with a relatively small number and then we would, as Commissioner McGaffigan has spoke of, gotten our experience on it along the lines of what we did with license renewal and move on.

Clearly, the marketplace does not reflect that. The needs that you all have identified that we will hear about today of power requirements in the 2015 or so time period are putting all of you in a position of needing more base load power and this need to follow this process.

I think that's sort of the downside of it. It's not going to come out as we had planned.

The upside of it, I think though, is that in contrast to where we were in the first round of reactor orders, the current fleet that we have today, the 104 units, I think we all have a better understanding of what is to be expected and the pitfalls.

So I think we enter this process to a certain degree with our eyes more wide open than they were before. And thus, it provides us an opportunity as we have today to look at that and say, given where we are now, where are the areas where we really ought to concentrate in order to make this as smooth, as uncomplicated and as predictable as possible, yet at the same time, meet our requirements to have an application process that provides for a review that is protective of public health, safety and the environment.

I think we can do that. Needless to say, I think we will be talking about some of the rough spots we all foresee but, hopefully, we

will also engender some degree of solution making going forward.

So I look forward to that part of this meeting as well.

Thank you, Mr. Chairman.

CHAIRMAN DIAZ: Thank you. Commissioner Jaczko.

COMMISSIONER JACZKO: I just want to make a few brief comments echoing some of the things that have been said by my fellow Commissioners.

One of the things that I think I found that Commissioner McGaffigan was referring to, the issue that seems to be driving a lot of what we are doing right now, is the public statements about the need for base load power in 2015.

It seems as though what has happened is we started at 2015 and worked back to roughly today. And tried to figure out how we take what is a schedule that exists and try to compress it into the time frame that we have to get to 2015.

It reminds me a little bit of the old rulers or yardsticks that you had where they are about six inches long. And you could unfold them one turn at a time. And you wound up doing that and getting a good, long yardstick.

Well, it seems as though what we have done is tried to take some of those foot long pieces and fold them on to each other and try to get a schedule that essentially is, from our perspective, anywhere from approximately a five-year schedule, depending on what kind of things when you look at design work, environmental work and the other licensing work, and tried to condense that into something that gets to 2015.

So, one of the things that I hope will come out a little bit is if we look today and look forward from the schedule and see realistically

what, given some of the processes that the NRC has, what kind of dates we are really looking at, I think, would be helpful to get a realistic sense of what kinds of things the NRC can do and what we can deliver.

CHAIRMAN DIAZ: Thank you.

Commissioner Lyons.

COMMISSIONER LYONS: I certainly would like to agree with the comments that my fellow Commissioners have already expressed.

Certainly the quality of the applications are going to be absolutely critical in understanding how the NRC can work through the challenge that we face.

I think back to a year ago when I not only didn't realize I would by sitting here, but I was participating in deliberations on the Energy Bill where the question was: were the incentives adequate such that perhaps one or maybe even in the wildest estimation, two units might be proposed for this process.

It is very much, to some extent, a case of being careful what you wish for.

Again, though, it will be an immense challenge. Industry certainly has a major role in that challenge and the quality of the application and the extent to which you can coordinate your own submissions and assure the quality.

And the NRC has a tremendous challenge. And I'm looking forward to the meeting today to discuss how we will all meet those challenges.

CHAIRMAN DIAZ: Thank you Commissioner Lyons.

I think we just gave you a little preamble in here just to set the right tone. And now that that tone has been set, I would like to turn

the meeting over to you. It looks like Mr. Beasley is getting ready to go.

MR. BEASLEY: Yes, sir. Thank you Mr. Chairman and Commissioners.

We do appreciate and agree with your comments, that this is a good time for us get together, and it is a good opportunity. And we appreciate the opportunity that you have invited us in to discuss a lot of what's in front of us.

I think what you are going to see here this morning, I hope what you are going to see is that as you invited us, we as an industry are coming together in an integrated approach. We are working very closely together as utilities, we are working very closely together with our vendors, and there is a lot that has been going on so that we move forward as an industry in a very integrated fashion. And I hope you are going to continue to see that as we go forward.

If I could, I would have to have our first slide up.

Next slide, please.

I would like to just introduce who is here today.

In addition to myself representing Southern Company, we have Bru Barron who is here representing as Chief Nuclear Officer for Duke Energy. We have Marilyn Kray. She's the president of NuStart Energy. We have Gene Grecheck, who is Vice President with Dominion, and Randy Hutchison, Senior Vice President with Entergy, and Scottie Hinnant, who is Senior Vice President and CNO, Progress Energy.

We are glad to be here today and we are going to be discussing several of the issues and the things that we would like to just have a dialogue with you about.

Obviously, as already been pointed out, it would be nice if

we were here today in an ideal situation where we could come in and have a design certification already behind us, have an ESP already behind us and then be submitting the COL.

But I think as all of us have watched the energy needs develop for our country and we realize over the last few months certainly what has happened in the way of fuel prices and the volatility and certainly recognizing that nuclear needs to be a part of our going forward energy security, we are here today to talk to you about the processes that are ahead of us. And obviously, Part 52 I think and we think has envisioned the process that will allow us to do some of this in parallel.

So we want to have that discussion here this morning and at least give you some of our viewpoints.

Next slide.

Our panel here is going to be discussing several issues. And obviously, you can see them on the slide and I won't go into any great detail because they will. But we want to talk about some of the insights we have seen from the ESP process. We also want to talk about, as we get into the COL process, we want to talk about some of the things that we have been doing, working with your staff and some of the discussions we are having and where that's going.

We want to spend some time talking about standardization, which I know is very important to you. It is very important to us that we work together very closely to standardize our applications. And I think you will hear some good information on what's going on there.

And then, of course, we would also like to talk a little bit about the need that we see for some stability in the Part 52 process as

we begin in this critical time to submit these applications and as we begin working together, and how we can take advantage of what goes on between us as we do that.

We appreciate very much the Commission's involvement and the guidance that you have shown so far in what's going on in this process. And we are particularly pleased with some of the recent conversations that we have had between us and the Commission, particularly as we look at operational programs and some of those aspects of the process.

We are pleased with some of what we are seeing, and I think we can build on that as we go forward and working in our relationship.

So I am going to turn to Gene and ask him to go ahead and talk about the early site permit process.

MR. GRECHECK: Thank you.

If we could have the will next slide that says "ESP Insights."

As you know, Dominion has had the lead application in the ESP process. And first, I would like to say that I would like to commend the staff for their hard work and diligence in trying to hold to the schedules that we agreed to at the beginning of the application process.

But as you can see, these applications, when they finally do get their way through the entire process, are going to be taking something on the order of 40 months. Now, that is longer than we had originally anticipated. Part of that is because of extensive public comments, and part of that is because of some of the complexity of the review process that we have seen take place.

We think one of the first lessons that we need to get from this is that now that the applications are reaching the end of the staff review process certainly, that we would encourage opportunities for the staff and the applicants and the other stakeholders to get together in a lessons learned opportunity to understand this process better and see where we can improve.

There were occasions during the review when clearly resources on both our side and the staff side were being devoted to issues that probably in retrospect were dilutive of the overall effort.

For example, when we spend a great deal of effort discussing emergency planning for a site that is immediately adjacent to licensed operating units and start getting questions on the level of detail of how many beds there are in a local hospital or issues of that type, then, clearly, we are not focusing on the issues that are most important for the review.

We are talking about an early site permit which by design is supposed to reserve a site for up to 20 years. And many of these questions were maybe relevant for an immediate COL review or something that would be ongoing as part of the operational programs inspections but certainly not in terms of an overall site review, particularly, when we are dealing with a site immediately adjacent to an operating plant.

Similarly, the environmental review process, we think, has demonstrated some inefficiencies and process gaps that need to be addressed. And partially, we found ourselves in a situation at the North Anna site where there were inconsistencies between the NRC's process, the NEPA processes, the processes that the state agencies need to take in order to do their part that in many cases were leading to

conflicting expectations on the part of various parties as to what level of detail was required.

And in this case, it was interesting that it was not the NRC asking for more detail. It was, for example, the state agencies asking for more detail that they needed in order to do a coastal zone certification.

They were very confused by what they were being asked to do, particularly in light of some of the words that were in the draft environmental statement and just going back and forth saying how can we draw conclusions when we don't have a detailed design. And yet we were trying to say the ESP process does not require a detailed design. And that they were having a very hard time understanding how that went.

So there are issues in here in terms of the interface between various Federal regulations and how all of that does support an ESP.

And why is this significant? Because the reviews that took place as part of the ESP will be very similar to the reviews that the staff needs to do for applications that do not reference an ESP. It will be a very similar site safety and environmental review.

And we think there is a lot of room there to be able to look at that process and identify what needs to be done.

You will hear later in the presentation today that we do believe that the overall review schedule with very, very close cooperation and meetings and understandings between the staff and the applicants, we do believe the review processes can be reduced, because many of the traditional review processes assume that there is a certain amount of new questioning being done by the staff. We

believe we can address many of those issues up front.

But you will hear that we believe that that overall process can take something on the order of 27 months including the hearing. And I think the target needs to be determined how we can optimize the environmental review to get within that same period.

I will make some comments about the Dominion application.

As you know, we have told the NRC for some time now that we are intending to apply for COL at the North Anna site in the third quarter of 2007. We are continuing to hold to that schedule.

We will be referencing the ESP. So at least half of the process will take place there. We do expect that we will have the ESP by that time and we will reference that ESP.

Unfortunately, we will not be able to reference a completed design certification by that time. But we are pledging to you today, and you will hear each of the companies here today that we are pledging to work very closely with the other applicants for the same technology. And we do intend to come to you with a very high quality application.

It will not be something slapped together. It will be something that will be very thought out. And we expect that with very good preapplication reviews with the staff, we will be able to meet your expectations and move forward.

And I think with that, I'll pass it on to Marilyn to further this discussion of how the industry is going to be working together on COL applications.

MS. KRAY: Thank you, Gene.

Moving on to the COL application process. I first would

like to acknowledge the progress that has been made in reaching a common understanding between the industry and the staff on a number of generic COL application issues.

These include the construction inspection program, the development of emergency preparedness ITAAC, and also the review of operational programs. The latter two are covered in the recently issued SECY 05-0197.

The frequent and productive exchanges with the staff have allowed the industry to issue draft E of NEI 0401, which will serve as industry guideline for preparing COL applications. And we look forward to resolving the remaining issues in the early part of '06 so as to support the preparation efforts of the COL applicants.

And in addition to working with the staff, the industry has also been very active in working amongst ourselves. Much of this effort is being done through NuStart since industry coordination was the cornerstone of its formation. And our focus is on standardization.

NuStart is coordinating power company input to Westinghouse for the AP1000. And we are working with Dominion to coordinate the input to General Electric for the ESBWR.

The result is that we will have standard plant designs for each reactor type.

Our commitment to standardization, however, extends beyond the physical plant to the preparation of the COL applications.

We are committed to using common methodologies for required analyses as well as for addressing COL open items resulting from the design certification process. And Bru Barron will touch on that as well.

For the AP1000, the interested companies will be

engaged in the development of the Belafont COL. Similarly, for the ESBWR, interested companies will be working with NuStart on the application for Grand Gulf and coordinating again with Dominion as they prepare the North Anna COL. And Ray Ganthner of Framatome will comment that a similar approach will be used for the EPR.

So the message to the Commission is that by combining this objectives of one, consistent methodologies; two, standard descriptions of standard designs; and three, common operational programs, the result will be similar and in some cases identical COL applications for each reactor type.

This industry approach, we believe, will offer an opportunity for a new approach by the staff in reviewing the applications.

So to comment further on the application process as well as our perspective on the staff review, I turn it over to Bru Barron of Duke.

MR. BARRON: Thank you, Marilyn.

Thank you, gentlemen, for inviting me.

As you know, Duke has committed to preparation of a COL application that will use the Westinghouse AP1000 reactor design as its basis.

We are also members of the NuStart consortium. And as such, we have accepted the lead within NuStart for coordinating industry input into Westinghouse in support of their completion of their design work.

Our objective goes beyond just producing a standard design. We want to a standard design that utilizes the operating experience and knowledge of a large portion of the operators of today's

U.S. PWR fleet.

We want to take away the need for any individual operator or licensee to feel the need to customize their plant based on their past experience. We want to roll that experience in as a part of this design process so that what we have is not only a standard design, but is a standard design that all the operators interested in building it will fully support and keep us from wanting or having the impetus to diverge from one another.

As Marilyn said, our emphasis is on using the same methodology wherever we can, the same analysis, and to the extent at all possible, identical text in these applications.

The notion or the characterization that these applications are being slapped together is not a good characterization. It is not correct.

And I think that as these applications come in, it will be incumbent on us to prove that they are not slapped together, rather, they are very high quality, I guess a term that I have heard used a number of times around this table.

I would challenge you, though, that in most circles, the definition of quality would be performance with respect to clearly established standards.

We are preparing applications which will be reviewed against a review plan which has not yet been developed. That parts of which will not be finalized, to our understanding, until after the applications are submitted.

Our ability to produce a high quality document falls back to the Commission and the staff's ability to clearly define those standards on a time frame that will allow us to build those applications

to that standard.

We recognize that will be a challenge. Even under today's administrative processes, the ability to do that will be very difficult.

We can be mutually more successful if the building revision of those standards actively engages us, as opposed to going off and popping something out at the last minute without adequate industry engagement. That will result in what would be characterized by you as low quality.

I would challenge that you have the obligation to help us produce high quality and that means engagement and giving us clear standards to which we can build these applications.

We are going to use a team approach. We believe that the Commission and staff need to get up beyond the paradigm of sequential one application after another type reviews. That we can provide you a standardized application, if you will, that you can batch process through. We will work it as a team from our standpoint and we will look for the staff to be able to process it the same way.

We recognize that you can't give blanket approval. That each individual application must be approved. But that does not necessarily translate into a redundant review of each and every application that comes through.

We believe that internal processes can be created that will allow you to review what is, in essence, the identical text one time and not have to repeat that effort potentially with different reviewers over and over again.

There are outstanding issues on the AP1000. We have gone through that list of issues item by item and characterized them.

The vast majority of them, 75 percent of those outstanding issues, are ones that you would not clear prior to COL.

They may be site specific. Some of them are requirements for as-built information or actual resulting test data once the equipment has been built.

We see those as naturally translating into ITAACs that would he resolved at the COL level through the issuance of the ITAAC, but ultimately will not be closed until the ITAAC itself is closed.

Approximately, 25 percent of the items do reflect requirements to do additional engineering or design work. We are committed to move that work forward on an accelerated, prioritized basis. We will work with staff to understand from their ability to review that information, where do our priorities need to be first. And we will do that work.

We will take the optimum advantage that we can of the preapplication period to provide information to the staff in the form and format that they specify, whether that is topical report or otherwise, to allow them to do their review, in fact, complete their review, if able, before the COL application goes in.

I understand that it can't be approved, if you will, relative to that particular application prior. But we do believe that the staff can do a lot of work to review this work in advance and help levelize the utilization of their resources.

For a plant application that properly applies a certified design or for that matter, a design which has a final design authorization approval issued, we believe that 15 months for staff to review information which has already been provided to them that by and large, they have seen already, that 15 months for the issuance of

the safety case, of the safety evaluation is not at all an unreasonable expectation, and believe that the Commission should set challenging standards for the accomplishment of that, to avoid reopening issues that have been reviewed prior, whether it's on another application or on ordering the design review process.

Gene spoke to -- there are opportunities to accelerate the environmental review which needs to go on in parallel to this. And we would hope we would get to a point where the staff is able to issue their environmental reports on the same schedule as being able to get out that final safety evaluation report.

I will pass it down. Thank you.

MR. HUTCHISON: I think I'm up next. And I will by speaking to the need for regulatory stability in the coming months.

As you all know, and basically what this conversation is all about today, seven companies have announced that they are preparing or intend to prepare COL applications. The first of those applications will be submitted starting the latter part of '07. It's a little over 18 months from now. And then other applications there be following in 2008.

So over the next two years, the industry will spend well over $200 million in preparing these combined licensing application.

We had the discussion earlier this morning, it is somewhat unfortunate that we have a flood of licensing activities out in the 2007, 2008 time frames but both business needs and I think more importantly, the energy needs of the country mandate that we reestablish the nuclear option now.

So our challenge is working together to find ways to manage this workload and to streamline the processes such as

standardizing the applications that we have already talked about.

As we undertake this workload, we need to be able to move forward with certainty that rework will not be required. Obviously, the quality of the applications we make are critical part of that.

And at this critical stage, we also need stability in the process. While we in the industry have long supported a lessons learned rulemaking, now we believe is not the right time to propose extensive changes to Part 52.

We do realize that eventually, a rulemaking will occur, and, in fact, may very well be needed. But now is not the time for such an exercise.

We believe that the work that NRC staff has done to prepare the rulemaking is useful and should be saved for future use. It should be supplemented by the insights that we have gained from the lessons learned from the -- that we will learn from the three early site permit demonstration projects that we currently have in progress, from experiences gained in the review of the first several combined licensing applications.

You know we have worked our way through the design certification element of the Part 52 process, and we expect the resulting lessons learned report will become the basis for improving the process.

We need to work our way through the COL process as well.

The discussions we are having are not really centered on issues with the regulation, but interpretation, implementation, the existing rules as they stand are not perfect but they are workable in their present format.

At this time, the proposed changes to the Part 52

language, if enacted, will, we believe, increase uncertainty and complexity for us as we prepare COL applications over the next two years.

If the agency moves forward with the rule, the rule will be issued in final form in early 2007, which will be a little over six months prior to the submittal of the first application.

Obviously, a lot of preapplication or application work will already be completed by the utilities. At the same time, at that time, the potential for rework and delay could be high.

To continue such a path will not improve the current process but add, we believe, to the uncertainty of the process, causing inefficiencies for both NRC, the industry and possibly confusing members of the public as to our respective roles in the overall process.

At this time, we believe the only changes to Part 52 that should be contemplated are those of a confirmatory nature associated with the recent Energy Policy Act and changes in other NRC regulations which impact Part 52.

Such a rule could be developed and processed as an interim final rule.

As I stated in the beginning, we have a mandate to reestablish the nuclear option in this country. A stable predictable licensing process is a part of the foundation of such a rebirth.

And the message I want to make is we in the industry are committed to doing our part to help manage these workloads in terms of the standardization we have talked about, coming together to do that through designs for license applications and using common approaches to the maximum extent possible.

Thank you.

MR. HINNANT: Chairman Diaz, we listened very carefully to your speech at the INPO CEO conference, and we share your views on what is necessary to enable new reactor licensing in the United States.

We in the industry are fully committed to maintaining operational excellence at our existing operating plants while we proceed with this COL process.

And we are fully committed to excellence in safety, security and emergency preparedness at our operating plants.

As I believe Progress Energy has demonstrated in the license renewal process, we understand the importance of complete applications, and thorough responses to technical questions from the staff in the licensing arena.

And we also share your views regarding the importance of the effective use of risk insights in the design, operation and maintenance of our existing plants as well as the new plants.

We understand the importance of submitting high quality COL applications and applications that clearly conform to the regulations that are fully supported by our vendors, our architect engineers, constructors and suppliers.

Everyone at this table understands the difficulty in successfully engaging in a construction program. However, we also share your view that failure is not an option. We will approach this task with that in mind.

I think it is important to build on some of Randy's comments regarding regulatory stability.

First, let me say the NRC deserves a great deal of credit for its effort to build a sound regulatory framework around new plant

licensing that we see in Part 52, and really at the time when few in the industry thought that new reactor construction was a viable option in the near term.

As my colleagues have discussed, while there are many lessons that should be learned and should be applied from the early site permit and design certification activities today, Part 52, while not perfect, has proven to be a sound and viable regulation that we can work with.

Progress Energy and others in the industry are now preparing to work our way through the COL process. Regulatory stability, as Randy said, is particularly important at this juncture.

Extensive rule changes that culminate in a final rule in 2007 could pose really significant problems for all of us that are developing COL's. I believe a brief overview of Progress Energy's time line will serve to illustrate that point.

We are evaluating the AP1000, the ESBWR and the EPR as technology choices.

We intend to select two sites, one in the Carolinas and one in Florida and submit COL applications for the two sites and for two units at each site.

If we build on those two sites, we intend to use the same plant design at both sites.

We will select at least one site and the reactor technology by the end of next month.

As we discussed with staff a few weeks ago, our COL applications will be submitted to the NRC in the fourth quarter of 2007.

Given this schedule, an extensive Part 52 rulemaking effort, which culminates into final rule in early 2007, could significantly

disrupt our COL application efforts.

The industry clearly needs stability in Part 52 processes as we begin to expend substantial resources in developing COL applications.

The Commission and the NRC staff have demonstrated their commitment to regulatory stability in many areas, including license renewal and the reactor oversight process.

I would ask you consider regulatory stability as you evaluate the merits of the extensive Part 52 changes that have been proposed by the staff.

Thank you.

MR. BEASLEY: Mr. Chairman, let me just wrap it up, and then we will, obviously, open it up for whatever you would like to do in terms of questions.

You have heard a number of key points here, I think, to address some of the things that you brought out, you and your colleagues brought out earlier, and that is, you have heard high quality, you have heard standardization, you have heard working together. And I think what you have heard from this panel here is a commitment by an industry that wants to move this effort forward and move it forward working with you as regulator to make it as efficient and as effective to get us to the end result.

And the end result, as you have heard some of us say, is that we have customer growth, we have load growth, and we realize that nuclear needs to be a part of our fuel mix and to give us the right diversity for energy security.

Speaking from the standpoint of a regulated utility, at Southern, and for some of these other folks, we are working very

closely with our states. We are working very closely with the public utility commissions. We are working very closely with our boards of directors.

They all have an interest. They all have an interest in nuclear. They have an interest in it for the reasons we have mentioned, and that is, energy security and meeting the needs of our customers.

We also know that the public utility commissions are going to do everything they can to protect the ratepayers, and to make sure that if they approve nuclear as part of an integrated resource plan, that they have the feeling of certainty, and they have the feeling and understanding that we working together have a good schedule and have a good process to bring these plants to commercial operation and to fruition.

Just to also reiterate the points that were made, we are already working very diligently as an industry. We are spending millions of dollars and so are you. And we are working very diligently to bring you the high quality standard applications that we have talked about.

And I think as we go through this process working with the NRC, working with the staff to make sure that we are doing as much as of the prework, as much of the discussions ahead of time before we submit, will help us ensure that we give you the quality and the kind of application that you are looking for.

It is important for us to, again, say that we have some anxiety about the proposed changes to Part 52. And we want to and have a lot of discussion about those. We want to be able to make sure you understand our concerns and our feelings about that.

At this time, we just feel like that a lot of changes to Part

52 will present a lot difficulties for us to give you the kind of the application that you are looking for.

As we go forward, we are going to be requesting from you periodic meetings so that we can discuss what's going on and what we are doing in the industry and what you are seeing on your side. I hope will you be receptive to that.

And we again want to thank you for inviting us here today. We think it is very important for us to begin this dialogue and to begin discussing what's ahead of us. And we are looking forward to working through the issues that we have mentioned here this morning. And we look forward to a lot of good dialogue and a lot of good discussion as we go forward.

Thank you, sir.

CHAIRMAN DIAZ: Thank you, Mr. Beasley, and thank you to the members of our panel for your team responses. I really appreciate that.

I really believe that somebody must have hit you with a 2x4 sometime in the last few weeks, and now you come to the realization that we have a monumental task ahead of us. And we want to be able to do that task. That task would require that you do your part and we do ours.

We are going to put our fellow Commissioners in order, Commissioner Jaczko will go first, Commissioner Lyons and then, I'm going to skip, I'm going to clean up, taking the bad position of cleaning it up today, just so I can relax and see what everybody is doing. And so from there, we will go to Commissioner McGaffigan, Merrifield and myself.

With that, Commissioner Jaczko.

COMMISSIONER JACZKO: I think as I was preparing for this hearing, I went back and look at the statements of consideration for the original Part 52 Rule. I think it was from 1989 or thereabouts. I was not involved in these issues at the time, and so I had not read it then.

I think it is certainly helpful because I think there is a lot of good foresight in there.

I want to read something that was said at that time. And I think some of these things have come true, and I think some of these things are still issues we are struggling with.

It said that "the Commission hopes that this rule will have beneficial effect on the licensing process.

In other words, the Commission hopes that effort has not been wasted on a rule that which will never be used."

I think we are clearly in a position where we are seeing the rule, certainly with the early site permits, that it is being used.

"But the Commission is not out to secure single-handedly the viability of the industry or to shut the general public out. The future of nuclear power depends not only on the licensing process but also on economic trends and events, the safety and reliability of the plants, political fortunes and much else."

"The Commission's intent with this rulemaking is only to have a sensible and stable procedural framework in place for the consideration of future designs and to make it possible to resolve safety and environmental issues before plants are build rather than after."

That was the statement that was made then. And I think that's still a very true statement to this day.

One of the things that I would like to explore a little bit, we heard a little bit, I think, from almost every one of you about the need

for regulatory stability.

And I think perhaps if you could just comment on this. I think one of the things that I see is, as I said, we have got a process that I think right now is being driven backwards from 2015 to see how we can fit everything into this next nine years or ten years to meet that schedule for a need for power.

And one of the things is that it seems is that we are taking the Part 52 process and kind of turning that on its head, even not from the work that the staff is doing, but from what we are seeing in terms of the various combinations of ways that applications are going to come in.

So maybe if you could talk a little bit about that and how you see each of the processes that you are intending to follow as being consistent with what is in Part 52, and the plan that was envisioned by Part 52.

MR. HINNANT: The submittal of a COL that did not reference an early site permit or early site review, while it would be nice to go through the early site process, you have public opportunities to participate in both the COL process as well as the early site review process.

So we believe those two things can be very effectively coordinated and done in one step as opposed to having the two-step process.

That's one of the reasons that we have elected the progress to proceed with the COL based upon a site that we select and then go through that entire process in one step as opposed to two.

COMMISSIONER JACZKO: And this is something I know the staff, I think in 2001, or the Commission approved kind of a

guidance on where we see things going forward in terms of the process. And we laid out some time lines and schedules that were envisioned that I think were largely -- I think certainly for COL with referencing an ESP and design certification, talked about 27 months. Straight early site permanent, the guidance there was 30 months. Clearly, we are a little bit longer than that, I think in what we've seen.

So I guess certainly on the issue of a COL without referencing an ESP, what kinds of time lines do you see? This is not something that the Commission had previously really looked at in taking a look at schedules for getting something like that done.

Do you see that as almost combining -- right now, we are looking at just an ESP taking about 40 months.

So there's going to be additional work with the COL. So a combined COL, ESP, I think you would have to look at least four to five years for timing for that.

MR. HINNANT: I don't see why the process would have to be very much longer because I believe these two processes lend themselves through parallel efforts and quite well.

In particular, when you consider the public intervention periods and hearing that those are necessary, I believe those can be done for the two almost in the same time line that you would do if you were doing each one of those individually.

COMMISSIONER JACZKO: That gets me back in some sense to the image I had earlier where you kind of take this five year long meter stick, ratchet down the segments so you got some something that instead of being long becomes thick.

So from a resource perspective here at the agency, what it looks like, what you are saying to us, is what you need is you want to

do a lot of these things in parallel which may shorten the time frame but does not necessarily eliminate the work.

A lot more work needs to get done. And some of the things that we then will have to certainly focus on is how do we prioritize that? Should our focus be on dealing with multiple COLs that maybe take longer period of time but we are doing less work in parallel. Or should we be processing fewer COLs and dealing with more of that work in parallel and then stacking the COLs? Again, because in some sense, we got the same amount of work, it doesn't necessarily matter how we -- well, perhaps, does matter but some of it will come down to shuffling things.

So maybe you can comment on that. Would you rather see a few COLs go through in a compressed time frame or a smaller number in a shorter time frame or have more starting at once that will take a slightly longer time?

MR. GRECHECK: I think that perhaps there is a third option. Maybe you don't have to choose either one of those. I think what you are hearing is that from the technical side of the COL applications, what you are going to be dealing with are essentially identical applications.

COMMISSIONER JACZKO: That may be true but that's not necessarily the limiting factor in a lot of our application process. It is often the adjudicatory process. And that will be a unique process for each application. So as we have seen with the ESPs, the public does what the public wants. And it's our job to respond to that and it's our job to give them the opportunities they need to deal with these applications.

So while there may by some savings on the technical side

for the staff, nonetheless, there are processes that is have to go forward in the adjudicatory. And I don't see right now that we can get all of these things done compressing these schedules. As I said, we are just fattening the meter stick, not necessarily shortening it and it just gets wider. So in the end, somehow, we have to figure out how to do that work.

What I'm trying to get a sense of from you is how you see from your perspective, would you rather see us stack things or would you rather see us trying to do more at once but that would mean probably extending the time line to each application.

MR. BEASLEY: Obviously if I can speak for the group, we'd like to see you do more at once. But we also would reserve comment or judgment so that as we get into this, we would like to be able to work closely with you to determine what we can do from an industry and you can do from an agency, to give us the optimum if I can use that word in turn around.

COMMISSIONER JACZKO: Just one more question to finish off. And I think one of the things that's really been envisioned in this Part 52 rule was the concept of standardization.

From what I'm hearing, I think you have done a good job of getting that message and really putting that to heart. And I think that will certainly be helpful as this process moves forward.

The last point and I think -- I'm not sure who made it, I may have made this Mr. Barron, you talked about the staff wanting to engage frequently and often. I think that is definitely a good idea as we get things like the standard review plan in place.

Not necessarily something you can answer now but perhaps you can get us information at a later date too. What are the

other kinds of guidance documents out there that you want to see in good shape? It's certainly helpful to hear from you about what those are. Obviously the standard review plan is an important one, We need to make sure we are covering all the bases there and getting everything we need.

So if there are some things right now, certainly you can answer. If not --

MR. BARRON. I guess I would just recommend that a workshop type approach where the staff would invite the industry in to compare notes and talk in those open forums about what all those documents might be and what the needs are, we think would be probably of most benefit as opposed to individual e-mails or documents trading back and forth.

That way, you can get a collective sense from the entire population of what are those needs that we think we need to have from the staff, from the Commission in order to facilitate our building quality.

MR. BEASLEY: Subsequent to this meeting, through NEI, we are going to be sending the Commission a letter detailing some of those kinds of exact things, subjects and matters that we want to have more in-depth discussion on with you, and the potential for workshops and meetings and such.

CHAIRMAN DIAZ: All right. Thank you, Commissioner Lyons.

COMMISSIONER LYONS: I very much agree with the Chairman's comment earlier, that this is a monumental task, certainly monumental both for industry and monumental for the NRC. But I also very much appreciate the discussion and the comments that all of you have made towards achieving that monumental task.

I particularly appreciate that one of the slides started with the need for safe and reliable operations of existing plants, because I certainly believe and I think all of us believe that that is essential to create the climate that allows us to even consider license renewals and in addition, it helps to enable the resources within the NRC to focus wherever possible on this particular issue of new licenses while we maintain safety.

There were many points that you folks just made that I found very interesting and very, very commendable.

I appreciate your comments on the stability of Part 52 and I'm anticipating that that may be something better discussed with staff this afternoon but certainly, I very much appreciated your comments on looking at the stability there.

I appreciated the comments from Gene and Bru on lessons learned and trying to find opportunities from the ESP process as well as throughout the process to try to continue to benefit from our experiences to see how to streamline and see how to better move ahead effectively.

And the common theme throughout much of your discussion of standardization, keeping applications identical wherever possible, similar words, maybe even identical words, common operational programs, think those are very, very positive attributes that if you can maintain them in your applications, will certainly help the staff and the Commission move ahead expeditiously.

One question I wanted to ask and it's a bit of a leading question: several of you have noted that energy needs are driving the schedule, your schedules.

I guess I very much hope that's true. But I guess I also

worry that schedules may be driven by both the framework of the risk insurance as proposed by Congress as well as the framework for the production tax credits.

I notice in Energy Daily this morning that DOE is setting up a meeting. I trust you will be participating in how to structure that risk insurance which I can well imagine will be immensely challenging.

I haven't seen yet -- maybe it's out -- I haven't seen the schedule for how DOE and Treasury are going to move ahead on production tax credits.

I will be curious in any of your comments on the extent to which the formulation of the PTC regs, protection tax credit regs, is or isn't driving your schedule. And I would hope, certainly not a Commission requirement -- but I would hope that as an industry, you are seeking to work closely with Treasury and Energy in coming up with the rules on production tax credit, so if I may say that we don't create an artificial rush to be the first through the gate. And at this point, I don't think until those regs are defined that we even know what the gate is defined as. So I would be curious.

But it seems to me that there may be an opportunity for industry, not the NRC, to work with Treasury and Energy to structure the PTC to try to frankly, simplify your job, simplify our job in terms of who's in the cue where, and what it means to be in the cue when I'm not even sure a cue exist.

So that is a leading question and I'll stop.

MR. BEASLEY: Let me see if I can comment on that. Obviously we as an industry are very interested in the rulemaking that's going to go on with DOE related to these issues. And through NEI, we are going to as an industry, work very closely together to obviously put

our input into it and work with DOE.

Let me step back and speak from Southern a little bit more to your question. The things you mentioned are of great interest to us obviously, however, what is really driving our interest and our need to push and look to nuclear for future base load needs is the growth in our service territory. And when we look at our projected needs and know what they are going to be in the 2015 to the 2025 time frame, we know we are going to need large base load units. And we also recognize that with the kind of fuel diversity we currently have, we want to maintain that diversity.

That is important to our rate payers and our customers. And in order to do that, we have to make sure and look very seriously at nuclear to continue that fuel diversity. So that's what is driving our initial interest.

Now, these other things, obviously, the Energy Bill has brought forward, are interesting things to us and we are going work together as an industry through NEI to give our input into that. But we definitely are looking at nuclear from the standpoint and interest of our rate payers.

MR. HINNANT: Commissioner Lyons, there has been three real forces that have come together that I think are driving most of us in the southeast. We do have increased customer growth which is a good thing to have when you are in the electric business.

We have not brought on base load plants in the southeast since the mid-80's, so we've been using up that base load margin as customers have grown in our service territory.

Recently, the rapid ramp up in fuel prices for gas, petroleum and even for coal has prompted some relooks at what kind of

additional generation we build as we go forward. You add to that, the increased environmental regulations and one comes to mind is the care of the clean air interstate rule.

You start to look at limits on emissions from even fossil fuel plants. So it's the conjecture of those three forces that have really prompted most of us to start more seriously looking at nuclear as a need in the 2015 time frame. We've done our studies and justifications based on those needs.

The Energy Bill incentives are certainly of interest to all of us. But these other forces are really the things I think are driving our need for base load generation to be constructed in the 2015 time frame

MR. BARRON: If I can just quickly punctuate what Barney and Scottie said.

The demand of our customers is going to be what it grows to be. And as regulated utilities, we have the obligation to meet that demand.

The question is how are we going to meet it? Are we doing to meet it with new nuclear? Are we going to have build new coal plants to meet it and replace old aging coal plants? Are we going to put more gas-fired plants on line.

I think the answer to that is probably yes, we are going to have to do a combination of all of those things.

The issue we are here today to analyze is the extent to which we can meet that demand, what portion of that demand can we meet with new nuclear generation.

I hope there was nothing in my comments earlier that reflected a sense of competition among us in terms of who's going to be first.

To the contrary, our effort is to be able to facilitate new nuclear generation being part of meeting the future energy needs of this country. And we need to do that in a concerted matter together, integrated and to the extent reasonably at all possible in a standard manner. Then that is our objective.

We are interested in the legislative benefits. But that is not driving the process that we are applying.

CHAIRMAN DIAZ: Thank you.

Commissioner McGaffigan.

COMMISSIONER MC GAFFIGAN: Thank you, Mr. Chairman. I hope there is going to be a second round. It looks like there will be plenty of time before 11:30.

CHAIRMAN DIAZ: No, we have another panel after this panel.

COMMISSIONER MC GAFFIGAN: You have another panel after this one?

MS. VIETTI-COOK: Yes, We have the vendors.

COMMISSIONER MC GAFFIGAN: Well, okay. I'll try to run throughout it quickly then.

Regulatory stability, I think we are all sympathetic. But, the fact of the matter is that we are doing to be hiring 350 people a year the next several years. Two years from now when those earlier applications come in, 20 percent of our staff will have been with the agency less than two years. And it's going to continue like that for several years in the future.

So you are dealing with a large tsunami of retirements, a large tsunami of additional work. And I think there is instability built into that that we are going to have to deal with and cope with. But there

should be no illusion about the fact that we will be experiencing a very large instability in our own work force and I suspect in your work forces as well.

Second element of instability is security.

The earliest that the staff hopes to have a 73, 55, 56, 57 appendixes safety security interface rulemaking completed is October of 2007. They hope to give us a proposed rule next May 28th. And hopefully we will get that out by late June, early July recognizing the need for stability

But in all frankness, there will be some major changes in the security area compared to the existing rules. Not, perhaps, compared to the existing orders but compared to the existing rules.

And my colleagues I think correctly -- I would have voted for it -- have suggested during the period I was away from the Commission that they would like the staff to have a requirement for target set analysis built into the new process so that we complicate, the larger the target set, the better. You complicate any terrorist attempt to attack the new plants.

So I'm just trying to acquaint you. In Part 52, I actually have a solution that we will talk about this afternoon, and that's to take the current 2003 proposed rule on which we got comments, including from the industry, and try to finalize it. And try to do that promptly, which means we will not do everything the staff wants to do. But we might be able to do a significant fraction based on -- we have a proposed rule out there. We have comments on it and we could try to resolve the comments as opposed to going to a new proposed rule. But we can deal with that this afternoon.

But I don't know. I would appreciate a reaction to the

notion that there's going to be perfect stability between now and late 2007 because there ain't.

So, what is your reaction?

MR. HUTCHISON: I think we understand that. I mean, we are well aware of you are hiring 350 people or so a day --

COMMISSIONER MC GAFFIGAN: A year

MR. HUTCHISON: A year. But you bring that number in.

COMMISSIONER MC GAFFIGAN: It my be higher to the extend you guys steal our people. I mean, the number gets to be higher.

MR. HUTCHISON: I understand. We will see similar things, because we are all going to have to have ramped up staffing plans and that sort of thing.

The point you made about the things that are going to drive some of the instability I think we understand and appreciate. Maybe your solution to Part 52 is something that needs to be looked at.

I think the point is, all of us out to be looking at where we can to minimize the instability.

I think we will have enough to deal with without creating any more unnecessarily.

COMMISSIONER MC GAFFIGAN: Part 52 changes maybe the minimum -- I mean the least of the issues.

I'm going to turn -- since my time is limited and I had not realized there is a second panel, Mr. Grecheck, you talked and Mr. Barron talked about doing environmental impact analysis under calls in 15 months or something. That really depends, as you well know from the Dominion case -- I mean, it might be 15 months from now that we will be able to finish the Dominion ESP because we are going to

have to reissue the environmental impact statement based on your new environmental report.

So I think there's going to be lessons learned for the industry from your relatively sad story as you said earlier that they better have checked all the boxes with state agencies and everything by the time they come in with a COL application, and the environmental report had better be not something that needs to be reissued, because I don't think 15 months is possible. But to have something less than 30 or 40 months possible is going to require that all the boxes be checked, that all of the potential interventions by parties other than the NRC, the states in particular -- but, God knows, when you go through these things and there is always something new -- are handled.

But I think the Dominion case is a case where the need for a new environmental report just upsets everything.

MR. GRECHECK: I certainly agree with that. And I think that's certainly one of the lessons learned that we found out that there is more to it than the NRC process.

But I will say that I do believe that in the end, what we are doing in terms of revising the environmental report would be a win for both sides and will simplify the processes, because what we are going to do is eliminate a large sense of -- or a large amount of re-review that may be necessary at the COL stage.

This will finalize and complete a major portion of the environmental review, which will save some efforts at the COL stage.

So I agree with your comment. If had to do it over again, obviously, I wish it would go differently. But on the other hand, I think we will establish a much greater degree of finality now than we would have otherwise.

COMMISSIONER MC GAFFIGAN: Can I just ask really quick. ESBWR versus ABWR. You all -- we are already at least three months behind on the ESBWR because the staff sent the application back in late September. And I don't know whether GE has answered the mail yet in terms of submitting a new application.

But is ESBWR on paper so much better than ABWR that you all feel compelled to reference that?

MR. GRECHECK: Speaking from our own sense, we believe it is. We believe that the ABWR is a licensed-certified design, as you pointed out. But we think there are substantial cost and technology advantages to the ESBWR that makes it worth our efforts to work very closely with GE to get it through the licensing process.

MS. KRAY: And I would add similarly. First, the ESBWR builds upon the design of the ABWR as well as the operating experience. But the ESBWR, likewise with the AP1000, integrate the passive approach to safety, which we find will result in both an improvement in safety as well as improvement in economics by minimizing the number of equipment that you need to purchase and ultimately build and maintain as well as lessening the reliance on operator action.

So both of them --

COMMISSIONER MC GAFFIGAN: 2010 is an optimistic date for getting that design certification for all of you who are going to reference that design.

CHAIRMAN DIAZ: Thank you, Commissioner McGaffigan.

Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Well, we had a lot of

talk today at the table. And to sum it up, stability is a two-way street. I think we both are going be grappling with that over the course of the next few years.

A couple of comments first.

I have very much embraced and have spoken about the notion of grouping. I think that is important for all of you. And I think it is important us if we can get you all aligned in vendor groupings.

When I approached our staff as to how they would deal with Southern, Duke, Progress and others, they sort of said, well, the COL is 53 FTE and $3.5 million. And you just sort of add one after the other. We can't do that and get where we need to get.

So I think to the extent you are getting together, that is a good thing.

The issue I would put on top of that, I think we all need to borrow somewhat of the model of the aviation industry. When you buy a Boeing 737, you buy a Boeing 737, Model 700 and you have two engine choices. Those are well designed up front. You have one or two choices for avionics. So it makes it very straight forward.

I think if you look back at where we were in the previous fleet, 104 units, you had not only the function of the nuclear island but also, issues on the power block which also significantly affected what we had to do and what you had to do in terms of timing and cost.

And I hope that as you forward that, that will not be taken off the table. Because I think that will help ease the stability for our part.

In terms of the early site permit, I appreciate the comments made about the length of time.

I was reminded of what we were doing with our license

renewal program. And I was here when we had the first couple of those go through.

It took us about the predicted amount of time, the 36 months to go through that. Today we are down to 23 months.

So I do believe as -- whether we will get the 15 months or not, perhaps remain to be seen. But I think we can do better. I don't think we need to use 40 months as a time line for ESPs. I think we can learn and we have to learn from what we do and be a more efficient and effective regulator as is stated in our strategic plan.

I am very interested in the comments about parallelism. It will be tough, obviously. I think others have spoken about some of the difficulties that go into that.

I would like to think that our agency can walk and chew gum at the same time. So I wouldn't certainly take those off the plate. I think we ought to think and have more dialogue, perhaps, as you mentioned in a meeting in the future to talk through some of this.

The focus I want to have in terms of my question today, however, is related to the Part 52 issues that were raised.

It strikes me that we originally entered into this effort with an intention and a request by industry to try to get our hands around more of this regulatory structure, in part to help minimize what was perceived as being regulatory instability. How do we capture that in a way to make it more predictable?

How do we capture that in a way to minimize issues that would be subject to a hearing process to the extent practical?

Obviously, we have to have opportunities for public hearings where necessary. But it is always to our collective benefit to have issues resolved up front, rather than have to have boards weigh in

on those with areas where there are ambiguities or questions.

I'm always a little bit fearful about throwing the baby out with the bath water. And I wonder whether we have really taken this -- we, I guess maybe you is perhaps a better way of putting it -- have taken a hard look at this as to whether we really need to turn the clock back to simply a very minimalist approach, or whether we would be losing some of the opportunities to put our arms around some of these issues so that they don't have to be decided in a future hearing process.

So I'm wondering if you could talk to that issue a bit?

MR. HUTCHISON: I guess where we are coming from on this is, as far as the proposed changes, is the timing in terms of things are going to hit within six months of several COL applications coming in and the volume of the changes, some 500 plus pages, I believe. And I have not waded through all of them yet. I'm into that but not through it.

And I think that's what driving more of the concern than any specific issue, just 500 plus changes coming in in six months creates all kind of potential issues.

COMMISSIONER MERRIFIELD: Well, I appreciate that. And we have had other rules here that have taken many force and they have gotten me very nervous as well.

There is a temptation -- and I think we all do it to sort of throw it down the staircase and the further it goes, the more likely we are going to feel nervous about it.

My sense is that there may be some very good things in that. Like you, I'm not entirely certain about it.

I think before we decide to toss it out, it would perhaps would be useful to taking a little extra time to sort of go through it and

determine it is really a product that we can use to regularize our process, to make us more predictable, or is it going to in that balancing scheme is it going to arise less so.

Because it strikes me that a lot of the issues that it touches on in the absence of having a rule there, we are going to have to deal with a lot of those issues anyway.

So are you better off by having that in a structured regulation or are you better off putting yourself in a position of having to judge some of those issues in a hearing process at some point down the road? And that is a judgment we are going to have to make and a judgment you are going to have to make.

I'm not certain whether we are there yet in terms of a full understanding.

MR. HUTCHISON: We welcome some dialogue on that, because one of the points I was making is an interim final rule that had some elements of what was being proposed in it. And I think in the letter we will be sending after this meeting, we will spell some of that out. That's our intention.

COMMISSIONER MC GAFFIGAN: Mr. Chairman, could I just comment?

I don't think the interim final rule approach works, because if we get any significant comment on that, it turns into a proposed rule. And then you maximize the instability. So I have heard that and I have seen that in the press. But I don't think it works.

I would also say that the approach that I suggested -- and I don't know how good it is. It is just something to look at of looking -- we put out a pretty extensive and not a minimalist rule in 2003 for public comment. And maybe the ideal world is we take our last two year's

ideas and throw them in too, and do a new proposed rule.

But we presumably can accomplish a fair amount by properly resolving the issues on the 2003 proposed rule, because I remember that package was pretty darn thick, too.

COMMISSIONER MERRIFIELD: It was.

One of my concerns, though, is it may be -- and I don't know. I don't know the full scope. I just want to make sure that we are not simply -- I think that earlier rule may have done some of the low hanging fruit. There may be some additional things in this rule, much of it may be useful -- and I would fear from throwing all of that out and going back to something more minimalist. In the end, in the greater scope, it is not going to give us more value.

I think we need to weigh these things, though.

COMMISSIONER MC GAFFIGAN: It may say something about my reading habits, but I -- or my sleeping habit or lack thereof, but I spend a fair portion of Veterans Day weekend wandering through those 500 odd pages. And it struck me a lot of it was irrelevant, because they are parsing what goes into an ESP versus what goes into a COL. And you all are basically giving up on the ESP process, with a few exceptions, Grand Gulf and Dominion, and you are going to submit it all to us.

So the parsing isn't needed. You know, the sort of lesson learned that was talked about earlier, that should we really be spending time on EP and an ESP. I agree. We shouldn't be.

But for the bob wave we are about to face some of these are very nice to do things, lessons learned from ESPs but perhaps irrelevant for the initial bob wave of applications.

CHAIRMAN DIAZ: We do have some additional work to

do.

Well, let me just make a few final comments.

First, I really appreciate if anybody have cell phones on to turn them off. They have been going off.

And, madam secretary, we may have to put a sign at the entrance to turn your cell phones off when you come in here.

Let me just make a couple of comments. I think we have overextended our period. But, I think this is the right meeting at the right time. I like to repeat that I am an optimist. But I have too many scars to forget about what has been going on before our time.

I really believe we are in a situation that offers many, many good opportunities for doing the right thing.

I think the Commission is thankful to the Congress for giving us a right framework both in the Policy Act and in the appropriations process.

We are going to sock it to you in your bills. You can be sure of that. So we can get prepared to be able to do the right things. But the Congress acted, we are going to have additional resources this year so we can prepare.

The issue is that they have to be used properly. We have to guide them now to the right place.

And that's why we need to know what is going to be happening so we can put those resources to work early and put them in the right places, so they can do the most good.

So it is critical that this interaction continues in an open manner so we can actually put the right resources at the right places. That is fundamental.

I think that one of the things we are saying is that there is

multiple issues and that you talk about integration. I keep talking about the integration between the processes that you have to have and the processes that we need to conduct and are required to conduct.

And those processes have to be done in a open manner. And we have to eventually get to a decision point. And that will probably be at a hearing. And that has to be done in a fair and equitable manner. We have to give the amount of time that is needed to stakeholders to actually participate in those processes.

All of those things get compounded. And I think what Commissioner McGaffigan -- in fact, all of my fellow Commissioners have been saying is that we need to look at every one of these issues, put them in the right time, place, resources and be able to come up with a process that, hopefully, is going the way that you want it to, but fulfills all of the requirements that the agency has to fulfill.

That is not easy. That is not easy because there are many, many of those things.

But, having said that, you believe, if I hear you, are very serious about this. We are equally serious of making our processes function.

To finish this -- and I'm not going to have time to ask any questions. I will finish with a couple of things.

I think the thing that should be driving you is standardization, standardization, standardization. And that means standardization not only in one part of the process, but in every part of the process. The more that it is, the better it is.

And at INPO, I talked a little bit about change orders. And our next panel, of course, is very, very much going to be looking at change order.

I think changed little throughout these few years. Do it good at the beginning and change little is a very important thing.

And unless my fellow Commissioners have any final comment, I want to thank this panel.

COMMISSIONER JACZKO: Chairman, can I make one final comment. I didn't want to cut you off from your closing.

One of the things that I think that we have kind of talked around a little bit here is a very important thing and that is the role of the public. Obviously, the NRC has a tremendous responsibility to be responsive there.

So I do certainly hope in the future we will have an opportunity to have a similar forum where we can hear from some of the other people that are involved, because it's more than just, I think, the two people -- the two groups in a sense represented at this table. But I think it's a larger group. And I look forward to that as well.

CHAIRMAN DIAZ: Thank you.

With that, we thank you again. You are adjourned.

And the next group will be moving to the table, please.

To save some time, we have representatives from Framatome. Is that Mr. Ganthner from Framatome. And we have Steve Hucik from GE, and Dan Lipman from Westinghouse. And we have our old representative from previous times in which you dealt with these issues, Jim, it is always a pleasure. We appreciate you coming and taking time to share with us today.

And I don't know whether you guys have prepared an order.

MR. GANTHNER: All right. Good morning, Mr. Chairman.

I'm here today representing both Framatome and -- UniStar Nuclear, which is a joint venture between AREVA and Constellation Energy.

I want to thank the NRC for holding this meeting. These are important issues and it's a national priority for us, particularly for inviting all of the LWR suppliers that are participating in the market. It is rare that we can sit on the same side of the table in this industry.

I want to also note that we recognize and respect the role of the NRC and the Commission in the public policy setting. And we intend to comply with those guidance and with the intended intent of the rules.

There large challenges that face us. Fortunately, these challenges are more organizational and management challenges than they are technical challenges.

We believe that all of the designs that will be submitted in applications in the next few years are sound technically and that they are the product of a mature and experienced nuclear industry in the United States.

As the design authority for the U.S. EPR, we are committed to provide a design certification application and COLs that do meet the quality standards which we have talked about earlier this morning.

We will utilize the lessons learned from our colleagues' experience in the design certification that they will be going through before the EPR goes through the process.

We expect to be able to include more than the minimum in the design certification as far as level of detail and have access by the staff for all the information that exists on the EPR either here in the

United States or internationally. Our design certification application is underway and we plan to submit it at the end of 2007.

As you know, Constellation Energy has announced that they will be submitting a first of a series of UniStar COL applications starting in mid-2008.

This COL will be standardized not only for the technical design-related areas, but as the other speakers this morning have described, we will also be standardizing many other sections of the COL.

This is a unique aspect of the UniStar business model because the operating programs and the technical design will be able to be standardized. We are estimating that 85 percent of the COLs will be identical wording for those submittal series.

We endorse the idea of establishing a technology-oriented NRC review team so that we can get your staff quickly up to speed on the technical and programmatic issues related to a particular technology, and that we would see large resource savings for both you and us in that type of approach.

Another opportunity for resource efficiency is the use of international efforts that have preceded the planned reviews in the U.S. Regulatory authorities in both Finland and France have performed detailed licensing reviews on the EPR, and the basis for that design is certified by them.

The NRC will want to explore how to access this information. And we understand that while these international results will not be used as the licensing basis, they can be a valid starting point for NRC reviews. So that overall, there is less time and duration of the resource investment.

We fully support the Commission's recently launched multi-national design approval program.

Likewise, the NRC should avail itself of the actual construction activities which are underway internationally. The international regulators are going through some of the things that we will be going through in the United States in the coming years. We can learn from that and globally, we should learn from that.

So close and early cooperation among the regulatory authorities should be explored by the NRC.

The final issue I want to bring up, to call the attention of the Commission to the potential for expediting the limited work authorization process. That is a process which would allow us to start some of this construction activity that does not involve the safety systems earlier in the overall program. And maybe there is a way to fold that part of the meter stick back a little bit without too much of an impact on any particular element of it.

So on behalf of the UniStar team and AREVA, I would like to thank you for holding this meeting. And we will be able to address the key opportunities and questions after this statement. Thank you.

CHAIRMAN DIAZ: Thank you.

MR. HUCIK: I'm Steve Hucik and I'm the general manager of nuclear plant projects for GE Nuclear. And I have responsibility for all of the new plant design, licensing and construction activities within GE.

GE also very much appreciates the Commissioners' request to allow the industry and the suppliers, basically, to review with them some of the key topics necessary to advance new nuclear here in the U.S.

As you know, GE has been active globally in constructing new advance plants, the ABWRs in Japan and Taiwan. And we are going to be leveraging that in our design activities for the ESBWR. And I think also that experience helps in the new construction in the U.S.

As you know, GE has recently submitted its application for the ESBWR for design certification, and we have been working with the staff for over two years in the preapplication phase, and we received favorable safety evaluations of test programs and several of the key application methodology processes for the ESBWR.

Additional methodology processes were submitted some time ago, and are in their final review stages with the NRC staff. And looking forward to final reports on those very soon.

We believe that this preapplication work and these advanced reviews and approvals of the technology can allow an efficient review process for the ESBWR as we move into the design cert process.

The NRC staff did review the GE's initial ESBWR submittal and provided initial comments in a letter that asked for additional detail in several areas that was needed by the staff to effectively proceed with their review and docketing.

GE has worked very effectively with the staff and have provided the additional requested material and provided schedules for some additional licensing topical reports that we believe would be helpful, and enhanced the review and approval of the design.

The staff has been reviewing this material. And we believe there are no further open items relative to the submittal of the material at this time and look forward to the response from the NRC.

We encourage the staff to consider the preapplication

review that's been done and the excellent cooperation that has been established over the last two years, and, in fact, over the last several months that we have been providing additional material and having reviews with the staff.

I think the cooperation has been excellent and the reviews have been helpful in providing the material that really the staff has requested.

GE commits to continuing to work closely with the staff and develop an efficient review process such that the staff can effectively review and receive answers on an expedited basis from GE.

Since GE has advanced plants like the ABWR both operating and under construction, and we are leveraging this in the design, we believe that the staff can get the kind of detail and understanding that it needs for its review. And we encourage the staff to consider this in the development of their review schedule.

We also recognize the advances in safety and operations that have come with the present designs that the NRC staff is evaluating as part of the Part 52 licensing process. The industry is implementing these Part 52 rules effectively, and GE agrees with the industry's comments provided earlier, and also indicates to the Commission its concern about the licensing uncertainty that some of changes or at least the understanding of some of these changes in the Part 52 rulemaking comments could bring.

Both the suppliers and NRC staff are fully engaged in the licensing process now, especially with our DC process proceeding.

It would not be helpful for schedule or resource applications at this stage of the process to invoke implementation questions that come during the reviews.

We agree with the rate utility's request to encourage the staff to either table the proposed rulemaking or look carefully at those that are necessary to proceed.

GE fully supports and will participate directly in the development of a standardized COL application for the common technology of ESBWR.

We believe the process that was used for the design certification where a standard set of contents and a review plan was established for the design and the single review of the technology occurs is very beneficial.

This should be considered as the best approach for the reviews of the many COLs that are anticipated to be submitted almost simultaneously in '07 and '08.

And we are already working with the industry and NEI in the planning of this approach. And we encourage the NRC staff to support and work with us in the future.

One last topic I would like to address is the need for some flexibility in the licensing approach for the submittal of the COLs and their reviews.

No applicant has really proposed a final ESP design cert prior to submittal of the COL. We request that the Commission and the staff remain open to various combinations that we have discussed this morning, including the submittal of COLs prior to the final design certification acceptance like at the time of FDA.

GE is proceeding with standardized design for the ESBWR for the multiple utilities who are interested in proceeding with it. The utilities agree with the need for the highest level of standardized design as possible.

In addition, GE intends to minimize the number of COL action items during the review process. We intend to work with the staff to develop final resolutions and develop action plans to resolve as soon as we can.

We believe that the standardized approach and the standardized design along with the standard COL can lead to an effective COL review.

We very much appreciate the opportunity to come and speak with you today and for listening to our comments. Thank you very much.

CHAIRMAN DIAZ: Thank you, Mr. Hucik.

Mr. Lipman

MR. LIPMAN: Yes. Thank you.

We would like to begin by thanking the NRC for an efficient, on-schedule design certification so far.

The Chairman began this morning's session talking about predictability. And I can think of no better example than looking at the AP1000 design certification experience that's scheduled from March 2002 until the present, has meant about 30 months to a FDA and a total of about 44 months to certification.

So, the NRC and Westinghouse ought to be proud of this accomplishment for AP1000 design certification, particularly that the design certification process has been demonstrated to be feasible, which my industry associates will now take advantage of.

Westinghouse is now eager to demonstrate the feasibility of the COL process. And we strongly endorse the comments made earlier regarding standardized COLs. By that, except for site specific differences, all of the AP1000 COLs should be identical.

Regarding NRC staff review of COL open items, Westinghouse began working on long lead plant design related COL items last year. And with the advent of funding from the NuStart COL program, we have been allowed to accelerate and expand these activities.

The COL action items clearly define the work to be done. And it seems to me that regulatory efficiency suggests that near term NRC staff review of plant design-related COL items is warranted. And what I mean by plant design-related COL items is what Bru Barron referred to, that 25 percent of the total COL open items.

Westinghouse is committed to a process where in we will be discussing with power companies who have either chosen or likely to choose AP1000 to work together to prioritize those items, organize them in an efficient fashion, and begin dialogue with the NRC staff to allow for regulatory efficiency of both costs and schedule.

A final comment, perhaps, in the area of changes.

We believe strongly that the finality of a certified design must be preserved.

If I can think of a simple rubric, it might be that if a change is not necessary, it is necessary not to change.

What I mean by that is really we all, regulators, reactor vendors, and utility companies, need to have the discipline to resist temptation to improve any certified design.

Finally, I think that, in general, changes should only be and additional reviews should only be undertaken if truly new information is furnished or provided.

MR. ASSELSTINE: Mr. Chairman, thank you very much for inviting me to participate in this meeting.

I thought I would offer just a few comments based upon the discussion that we have heard so far from a financial perspective.

First, as I think you noted, the Energy Policy Act has generated a good deal of enthusiasm and optimism concerning the development of new nuclear plants. That coupled with volatility that we have seen, particularly in natural gas prices and the need for new base load capacity, particularly as we move into the next decade, has generated a considerable amount of activity, certainly with what we have seen over the past couple months.

In my view, the Act did a couple of things. First, it did reiterate a strong public policy in favor of developing new nuclear plants in this country.

And second, it included in a number of provisions that are designed to remove some of the barriers not only to developing and building, but also to financing new nuclear plants as well.

We are, as I know a number of you noted, at a very early stages at this point in the implementation of the Act. A considerable amount of important work needs to be done by the Department of Energy in implementing some of the financial incentives provisions and the Department of Treasury as well, by this agency around the licensing process and by the financial community to implement the provisions that were included in the Act.

Some of those provisions will be very important on the financing side. Certainly, Commissioner Lyons, you mentioned the production tax credit and stand-by delay risk insurance.

I would add to that the Federal loan and loan guarantee programs that are broader, admittedly than just nuclear, but that are available potentially for advance nuclear power plants as well.

Admittedly, we are in a early stage, but I think that the enthusiasm and optimism so far is justified. And I believe that the Act together with the changes that we have seen so far in the licensing process put in place the essential building blocks here to move forward.

In terms of how investors look at and how the financial community and rating agencies look at an investment in a new nuclear power plant, essentially what we will all focus on is the magnitude of the investment, the complexity of the project, the length of time for completing the project, and ultimately, what we will be focusing on is the likelihood that the plant will be completed and will enter commercial operation on schedule and on budget, that the plant will perform as expected and that the sponsors will be able to earn their anticipated return on their investment, recover the investment that they have made in the plant, and be in a position to meet their debt service obligation.

Those are really the critical ingredients that the financial community will look at.

Now, building a new nuclear plant or for that matter, a new coal plant, is among the higher risk investments that a utility or an unregulated generation company can make.

It is not surprising that the vast majority of the new generation that has been built in this country over the past decade has been gas-fired generation.

We have benefitted from having a large component of base load generation that was put in place in the '70s and '80s. But beyond that, it was relatively simple and straightforward to build and finance new gas-fired plants. They are relatively simple plants to build that could be built for $550 to $600 per installed kilowatt.

Much of the construction work could be done off site, and

much of the financial risk and uncertainty associated with cost, construction completion and anticipated performance could be shifted to the suppliers. So it was a relatively straight forward matter to build, develop and ultimately, to finance those plants.

Coal plants and nuclear plants are somewhat different. Those plants are both large, much more complex machines. Capital investment to build those plants is substantially higher than to build a gas-fired plant. The construction process is considerably more lengthy, on the order of four years compared to two years for a combined cycle gas turbine plant.

And both coal and nuclear have regulatory considerations to be considered and dealt with as well.

In the case of coal, those regulatory considerations tend to be more longer term. They tend to focus on potential for new greenhouse gas requirements that could come into play down the road.

In case of nuclear, the regulatory issues are more front loaded and really have to do with the ability to put the plant into commercial operation when it is completed, and then the expected operating performance of the plant going forward.

We have a new licensing process that we all tend to believe will address and correct many of the problems that we experienced with the last generation of plants.

The challenge, of course, is that that process is as yet untested and we have to work our way through the process to gain confidence that this process will work as we all anticipate that it will do.

There is a stand-by delay risk insurance provision in the Energy Policy Act which does provide some degree of comfort on the financial side.

However, I would say that if we ever get to the point where we have to use that insurance, we really would have failed the process. And the likelihood of additional plants going forward beyond that will be relatively low.

As investors try to gauge the likelihood that this process will work as we anticipated, I believe that they will focus fairly heavily on the early stages of the processes, the early site permit review process, the design certification process and the COL process.

Those will be the benchmarks that we will tend to look at to gauge whether, in fact, the risk of potential problems and difficulties down the road after substantial capital investment has been made is as low as we expect it to be.

So we are at a relatively important stage of the process here as we begin to lay the groundwork and work through those key elements that those of us in the financial community will be watching, the early site permit process, the COL process and the design certification process.

We tend to believe that, obviously, we want to see and need thorough, complete, detailed applications which provide a sound basis for reaching complete and final judgment on the key issues that need to be resolved in the process.

It also appears, certainly based upon the discussion you heard from the first panel, that what you are likely to see from the industry side is becoming increasingly clear, both in terms of the number of design approvals that will be sought and the number of applications.

One of the positives of the new process that has been put in place is that it provides the ability to resolve issues early on in the

process before substantial financial commitments have been made to a plant. One of the drawbacks is that that process provides a great deal of flexibility. And I think you are coming to realize what you may see in terms of a variety of different proposals from the industry side and different combinations of elements involving COL applications, early site permits, as well as the three design certifications that the industry will be focusing on.

Getting it right, working through this process in the early stage so that the process works smoothly and efficiently I think is a critical element here in terms of some of the tasks that are ahead of you. I think the first panel did a very good job of illuminating some of those.

You are likely to see a number of possible variations. You are likely as well as the industry to need to add substantial resources to meet those requirements. You will need to coordinate very closely with the industry to make sure that the processes work on both sides of the table.

Everywhere where standardization can be achieved throughout this process will provide some benefits as well. And finally, on your side of the table, you will also need to manage the litigation process as that goes forward as well.

So, the challenges are substantial.

I would say, though, that the next few years as you focus on the building blocks leading to a COL decision are really the critical ones from a financing standpoint as well.

CHAIRMAN DIAZ: Thank you Mr. Asselstine.

Thank you all the members of the panel for joining us again today.

I think we are ready for Commissioner Jaczko.

COMMISSIONER JACZKO: This is perhaps a question for all of you.

One of the things we focused on in the first panel is some of the time lines for completing actions from the NRC's perspective on the regulatory side. And as I said, there is a date out there, 2015, that seems to be looming.

I wonder if maybe you can talk a little bit about what your thoughts and perspectives are on the time lines for the construction side? We haven't talked a lot about that. But again, there seems to be -- will be a real rush, in a sense, if the licensing process is effective, if licenses are granted, that there may be significant amount of construction happening at the same time.

What do you see for potential problems in that arena? What do you see for time lines on that side?

MR. HUCIK: Let me try to make a comment on that, because we have been involved in the construction of the ABWR, which is an advance plant of a similar design in Taiwan. And we purchased over a billion and a half of equipment from the infrastructure that exists globally.

And from a time line in terms of schedules, we have looked very carefully at what, in my case, would be the ESBWR. And we bases the schedules on the successful application in Japan of the ABWR schedule, which is a more complex plant, more equipment, more concrete, more rear. Evaluated that with the same kind of constructors and also we were also working with some U.S. constructors now to look at that schedule to see what is possible.

So in terms of construction from, say, first structural

concrete to fuel load, we believe 36 months is doable. And that is based on modularization techniques that in some cases have already been developed for the ABWR and can be leveraged into the ESBWR plus additional work that's being done by, for example, Electric Boat in Newport News in the submarine area, applying some of their modularization techniques across our plants as well.

So with a 36-month schedule from, say, first concrete to fuel load and then, say, six to eight months from fuel load to COD for preop and start-up testing, you get a four-year -- a four-year construction schedule is doable.

COMMISSIONER JACZKO: Have you taken a look at that at what the needs would be for the agency perspective in terms of doing construction inspection, and those kinds of things? Have you factored that into that schedule?

MR. HUCIK: Well, the ITAAC in that have to be -- you know, there has to be a program and again, close cooperation with the NRC staff on milestones and schedules that have the be coordinated.

It's just like very similar to producing the equipment. You send the procurement specs, which basically say these are the design requirements, these would be the ITAACs and the criteria under which they would be evaluated and checked off. You have to have certain milestones progressed along the way, keeping the NRC informed of the progress, the schedules that are being met, and if there is rework or changes, keeping the staff informed so that they can schedule their resources to come in, review, approve, and sign off as you go.

That has to be developed for each of the construction projects.

But if the construction is standardized, then that can be

developed as a standard plan for most construction projects.

MR. GANTHNER: Commissioner Jaczko, I would like to just add that from the work that we are doing in Finland, I think the NRC could connect with the STUK, Finish regulatory authorities, because they are deeply involved in all aspects of the construction going on in Finland. And the construction schedule in Finland was approximately five years from contract award to on-line delivering power, so that includes the site preparation.

So if you take that, say, from first safety concrete to turnover is a little over four years time frame.

So, those type of schedules are being done internationally in Japan, Taiwan, and Finland and soon in other countries. So I think, again, leveraging the work that the other regulatory bodies have done to make that happen would be a good investment of NRC resources.

MR. LIPMAN: I would only echo what Steve said. I mean, we too are looking at very similar construction schedules. But I might add in addition that there is a period before you hit the construction site where you are engaged in procurement of long lead items and also, perhaps, some preconstruction activities with respect to modularization and so forth that might have an impact on resources of yours.

COMMISSIONER JACZKO: Thank you.

Mr. Asselstine, did you have anything on that one?

MR. ASSELSTINE: No.

COMMISSIONER JACZKO: I have a question for you, then.

You talked little bit about some of the things that from a Wall Street perspective that they look at. As you see kind of the

various flexible approaches that we may see from license applications, are there approaches that from your perspective would be more favorable to minimizing some of the risks? For instance, some cases we're looking at design certification that will be happening very much in parallel with the licensing application.

Is there some sense that there is a preference for how those things would be handled to minimize some of the risks in that.

MR. ASSELSTINE: Probably not.

The critical factor for, I think for most investors will really be to focus on when the major capital investment in the plant starts to take place. And that will really take place after the COL is issued.

What investors will want confidence around is that the process up until that point has been done correctly, it has been thorough, detailed, and there is every reason to believe that once you go forward from that point, and the major capital investment is made in the plant, that the residual risk of problems or difficulties down the road will be minimized as much as it possibly can be minimized, recognizing that the plant has to be built, has to be built in conformance with the license.

The NRC has to verify that and establish that. But I think the focus will be on how that process works.

You can work through the process with a variety of different approaches. But I think what investors will focus on is regardless of which approach is used, have we done the job right and do we have confidence going forward once the COL is issued and once major financial commitments are made to the plant that from that point forward, the risk of unnecessary delay, problems or difficulties in getting the plant into operation have been minimized.

COMMISSIONER JACZKO: One other very brief question. The first panel I think we heard from one of the people mentioned that there were essentially three factors that are driving kind of the current projection of about 2015.

They were essentially that there had essentially been no base load new generation since the '70s and the '80s, which you mentioned, the potential increase in customers and there was a third factor that escapes me at this point -- cost of other fuel prices.

Which of those three factors do you think is really the one that right now is pushing us toward looking at 2015 as the date for -- I mean, some of those factors, certainly the first two factors, have been around for some time even, the third perhaps one could have speculated in the future there would be concerns with price of gas and some of those supply issues there.

MR. ASSELSTINE: I think that the driving force has really been the need for incremental base load generation.

All of them tend to work into the equation. But I think the fact that we haven't built base load generation in a considerable amount of time, demand growth has been moving relatively steadily between two and three percent per year in most regions of the country. And we have worked off what really was a surplus of base load capacity.

And we have gotten to the point now where must generation companies and most utilities have determined that they will need additional base load capacities sometime in the next decade.

I think that's probably the big driver.

Then the question is, what are the alternatives that you look at to meet that additional capacity? And there, I think up until perhaps relatively recently, most of the focus and most of the attention

was probably on coal. We have seen a number of companies announce plans to develop and build new coal-fired plants and to actually work out regulatory agreements with their state regulators on advanced approval of recovery of that investment as long as the investment came in line with the projected budget and providing incentive returns to compensate the utilities for the higher risk of that investment.

I think what the Energy Policy Act did is put in place the building blocks to allow companies to say, nuclear is also a viable and feasible option going forward, both in terms of the cost of adding in a nuclear plant and in terms of trying to minimize or reduce those unique regulatory risks that are associated with nuclear.

I was at the Edison Electric Institute financial conference two weeks ago. It was interesting, virtually every speaker, including CEOs of non-nuclear utilities were talking about not only new coal but also new nuclear projects and proposals. A year ago, there was virtually no mention of nuclear at all.

So you need a base load, but some of the essential underpinnings to look at nuclear survival option have now been put in place as well.

If you look at the volatility that we have seen in natural gas prices, particularly following Hurricane Katrina, that has just reinforced the wisdom of having diversity in terms of your fuel supplies and fuel sources.

CHAIRMAN DIAZ: Thank you, Commissioner Jaczko.

Commissioner Lyons.

COMMISSIONER LYONS: I appreciate the comments from the panel and your emphasis on a number of aspects that I think

were also of importance in the previous panel.

I heard the word "standardization" many times. I heard the emphasis on high quality applications. I heard the emphasis on minimizing changes. All of which I think are critical and will be very, very important as we move ahead.

It was mentioned of use of the international experiences from Finland, from Asia. I think we need to take advantage of those experiences. And the recent international or multi-national program that the Chairman has been working on, I think, can be instrumental in trying to provide as much international input as is appropriate in the process.

For a question I was going to focus in the same area that Commission Jaczko did, and you have largely covered it.

But let me go back to the construction inspection program, which is one where personally I'm quite concerned about the ability of the staff to respond to what is going to be a very different construction type of process than the experience with construction some decades ago.

I think it is very important that our staff and the Commission learn from whatever international lessons are available, again, Asia and Finland would be the ones that primarily come to mind. But I was particularly curious to follow up on what Commissioner Jaczko was asking, whether from your perspectives, interactions have begun with staff to try to work between staff and industry to shape a construction inspection program that will recognize the modularity, the international aspects, the off-site construction aspects that are going to be very different than any experience that we have had in this country previously.

I am just hoping that perhaps any of you could comment

on the extent of those interactions with staff as we are shaping a new construction inspection program.

MR. GANTHNER: I guess from our perspective, we have had a staff visit to the Finland plant about two months ago and with that specific goal in mind to understand how the construction inspection program was going there and how the regulatory body was doing there.

I think at this stage, I would characterize it as it is in its infancy as far as being a viable interaction between the two organizations.

I know some of the others have maybe gotten a little further along.

MR. HUCIK: I would say on the ESBWR, since we are just going through the design certification, just starting that process, we are probably a little further behind in the infancy. But we have a chance at this time as we develop the total construction plans for the ESBWR and develop the detailed schedules and develop the modularization plans and do that in combination with the actual constructors, rather than just the vendor, the supplier putting out these dreams of how to do it. But actually take the physical experiences of Japan and modularization that they have done, combine it with the capability and techniques that U.S. constructors can do from that.

As we develop those plans, that is the best time for them to be able to factor in the NRC involvement and have some workshops like were suggested to get them involved in where is the best time for them to review and approve, where is the best time for them to get involved and actually see some of the aspects of the construction.

So we are not there yet. And I admit that. But we have an opportunity to plan that with the help of the staff so that we can

expedite the actual process when it occurs, so that we are not trying to develop those plans on the fly.

I think the key would be to have those plans developed in advance of the construction to the maximum extent possible so the staff knows what resources and what kind of talent is needed to do it.

I think you are hitting on one point that there may be different talent that is needed to actually do the review and the approval because of the different aspects of the construction.

The early review of that during the design phase will, I think, help that.

MR. LIPMAN: I think in our case where we have had some degree of interaction already with respect to ITAACs. And that's reasonably far along.

But relative to the different construction process you referenced, I think that is a key point, and I think that's something that is going to require some up front interaction and investment, and perhaps, why Mr. Barney Beasley talked about why we need to get together on a periodic basis. This would be one area where we would see as being perhaps very fruitful, because there will be some degree, at least in our case, of potential offshore construction structural modules, although modular construction is quite common in gas turbines.

I think there are some unique characteristics particularly with respect to structural modules in particular that we need to interact on earlier rather than later.

COMMISSIONER LYONS: Did you want to add anything on that?

MR. ASSELSTINE: I think the only point I would add is that I think the ITAACs are another critical element here, obviously,

once you get to the point where investors are putting their money into a project, they are going to want to understand that, in fact, the rules of the road are clear, they have been well established, everybody knows what the requirements are, that the plant has to be built to and everybody understands how those requirements will be applied during the construction process so we don't get surprises at the end of the process.

I do think certainly from some of the presentations that I heard when I was a member of the Secretary of Energy Advisory Board's review of some of the nuclear barriers that there were some real opportunities to capture some of the modular construction techniques that have been employed internationally in the next generation of plants.

And so ideally, we would want the rules to be sufficiently flexible to allow the incorporation of those techniques, because I think they will help reduce construction costs and risk uncertainty as well.

COMMISSIONER LYONS: I appreciate your responses. I hope there will be very strong cooperation, coordination between industry and the staff as we try to develop an optimum process here.

CHAIRMAN DIAZ: Thank you, Commissioner Lyons.

Commissioner McGaffigan.

COMMISSIONER MC GAFFIGAN: Mr. Hucik, could you give me in two minutes the advantages of ESBWR versus ABWR, because I'm a little puzzled as I sit here and listen to Mr. Asselstine talk about regulatory uncertainty and all that?

We had the opportunity, if Grand Gulf and Dominion had chosen the ABWR, to have certified designs and early site permits. And those two would have moved, I would suspect, right to the front of

the class.

So why -- you also have, you say, experience in Japan and Taiwan. Why exactly is ESBWR so much better than ABWR that I am willing to risk the additional uncertainty?

COMMISSIONER MERRIFIELD: A two-minute commercial. You don't even have to pay for it.

COMMISSIONER MC GAFFIGAN: He is talking against himself.

MR. HUCIK: I will try to be more technical. I was involved in the detailed design and development of the ABWR, so I have allegiances both ways. So I have to be careful how I respond.

I think the key response, though -- and I think Marilyn Kray did an excellent job -- is the ESBWR incorporates the passive features. And so you are eliminating equipment, you are eliminating piping, you are eliminating inspections, you are eliminating construction inspections.

COMMISSIONER MC GAFFIGAN: But ABWR is supposed to be passive, too, to some degree.

MR. HUCIK: It is, except in the emergency core cooling system you have active pumps, you have divisional separation, you have piping, you have motors, you have control systems. All of that it all stacks on top of each other. So it adds more construction time on that.

I think on a 60-year lifetime, utilities evaluate not only the construction cost, which is a one time thing, but evaluate the advantages that over 60 years of less inspections, less surveillance requirements, less impacts to the tech specs. And that way when a pump is not available or a diesel does not start -- for example, on the

ABWR, you still have emergency diesel generators.

On the ESBWR the design allows for the diesel generators to be non-safety. So the requirements on those diesel generators are significantly less. So not only is the cost less, but the requirements, the testing, the tech specs, all of that is much improved and from an operations standpoint, that is a big advantage.

COMMISSIONER MC GAFFIGAN: I gave you your two-minute commercial.

And I am going to turn to Mr. Asselstine and just ask, you said that when the rubber hits the road it's after the COL. And that's when the big bucks are going to flow and that's when you are going to make some judgments -- if I have the words right -- as to what confidence you have going forward.

There should be no illusion that the anti-nuclear environmental groups are going to contest every one of these in hearings. And if they are not satisfied with final Commission decisions to issue a COL, they will be going to the appellate courts seeking changes to ITAACs or God knows what.

You will know it when you see it?

I mean, there clearly will be something that is not final in that appellate courts -- we live in the American legal system. No one is going to change that for better or for worse and people have the right to appeal Commission decisions to the courts. And the courts take their sweet time generally in ruling on those matters.

So how do you as an investor deal with that uncertainty?

MR. ASSELSTINE: Well, I think that certainly if you look at this process compared to the experience for the current generation of plants, there are some definitely positive features about this process.

Clearly, we are going to start with much more complete designs. And hopefully, designs that are sufficiently complete so that you can really address and litigate, if necessary, all of the relevant design issues concerning the plant.

COMMISSIONER MC GAFFIGAN: My question isn't our ability internally to litigate.

It's just I can't imagine -- and even I won't be a Commissioner in 2010 when these things come up, late 2010 perhaps.

CHAIRMAN DIAZ: We have hopes.

COMMISSIONER MC GAFFIGAN: What, that I will be gone or this I will get a fourth term. But the issue you are facing is that this stuff will be litigated before appeals courts. People will not accept the decision of whatever Commission is sitting here in 2010 for the initial COL application as final. They will find flaws -- I mean, if look at PFS in Utah at the current time, the finality is in the eye of the holder.

How are you going to judge all that?

MR. ASSELSTINE: Well, the opportunity for litigation, including the opportunity to appeal a positive decision from the Commission will exist.

If most of that gets resolved at the preconstruction stage, even if it is a litigation of the COL license itself, that litigation and that uncertainty is going to get resolved relatively early in the process.

What I think investors are more concerned about is what happens when you get to the pre-operations stage.

Spend the time doing the job right within the NRC process, get the COL decision, if the Commission determines that it has the basis to issue the license, go through any court appeals at that point, get a judicial resolution to those challenges.

COMMISSIONER MC GAFFIGAN: But will you wait for the judicial resolution before -- because I'm predicting that a 100 percent of time, at least for the early folks, there is going to be appeals to the Federal appeals court. And if 100 percent of the time you wait for the Federal appeals courts to get all their briefs and make their decisions, is quite a long of time.

MR. ASSELSTINE: I think the companies and investors will have to make a judgment at the time that the COL is issued based upon what are the unresolved issues, what are the issues being litigated and challenged and what is the likelihood of success.

Maybe that if the issues appear to be significant and there is a potential for reversal, that you wait and at least get an initial determination from the courts in terms of whether they are willing to issue a stay or not.

It also may be possible to go forward with financing and go forward with the project at that point.

I'm less concerned about that stage than at the pre-operation stage, then by that point, you have made the capital investment in the plant. The plant is ready to go. And then the question is, is there a risk of litigation or delay?

At that point, I think that that is one risk where at least the stand-by delay risk insurance comes into play and provides some added degree of financial protection, at least for the initial six plants.

COMMISSIONER MC GAFFIGAN: I'm not so sure because the pre-operation stage, as you know, because you were here when the rules were put together, requires that the litigant make a prima facie case accepted by a majority of the Commission -- that they have to have such a compelling prima facie case that the Commission

says this hearing has to be a prior hearing as opposed to going ahead operate the plant and we will have the hearing as we go along.

That's a pretty high burden for somebody at that stage if the plant was built according to ITAACs.

MR. ASSELSTINE: I agree completely. I think the actual risk is relatively low, because you will have final determinations at the early stage.

COMMISSIONER MC GAFFIGAN: I'm not so sure at the appellate stage. I'm not so sure at the earlier stage whether you will end up waiting for appellate courts to act or not.

MR. ASSELSTINE: You may or may not.

The key point is the amount of investment that will have been made at that stage in the process is relatively small compared to the pre-operations stage.

So from the magnitude of the impact it is much greater at the pre-operations stage in terms of the litigation risk, I would agree with you. I think it is actually fairly small at that point.

CHAIRMAN DIAZ: Thank you very much.

Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman. I want to associate myself with some of the comments made by Commissioner Lyons.

I think we do have a real challenge as to how we will deploy ourselves as an agency. And a lot of that will play very much on a high quality level of interaction between the three vendors we have in front of us today and ourselves, as we no longer, for the most part, have a domestic capability for building nuclear power plants.

And most of that work, at least as it appears today, is

going to be conducted abroad. Our ability to deploy our inspectors to those facilities in Japan, Korea, Spain, France and elsewhere will be highly dependent on making sure that we formulate this in a way that is going to be predictable for us and for you and dependable. And that is going to be a lot of work, I think, in that regard.

So I agree with Commissioner Lyons.

Having said that, I am concerned about one thing, and perhaps this is reflective of the recent issues that we have had with our friends at the Department of Energy.

But one of the things that as a regulator we are always subject to is sort of a ready, set, wait where things happen. And as a regulator, we have to build our structure to be ready to receive an application. But things outside of our control happen and we never ultimately get that application in the time that was first engendered.

One of the things that concerns me in that respect is the issue of forging. You all are out trying to sell your wares, not only here in the U.S. but abroad, and you have an international choke point. And that choke point is the ability to have forgings capable to build the vessels that all of you would like to sell.

And that is a real issue at this point. And one of the things that does concern me, given the sheer number of interested parties that we have today that may want to seek combined operating license application is we sort of march down a road with 12 but really the pipe of forging is only going to give you a much more limited number at any given period of time. And so we are killing ourselves.

And we are going to get to a point where you guys are going to say, well, thanks for the application, but we are going to have to put that on a shelf for while until we can meet the commitment that

we have for the people we are trying to sell these to, given the way the nature of the process works.

I'm wondering if you could talk a little bit about that.

Obviously, that would be a enviable position for you to have that be your biggest issue but obviously it is one that we have to be concerned about.

MR. HUCIK: We have been in discussions -- the limiting factor, as you know, is JSW because they are the only capable factory of producing the very large ingots that both GE needs for the ESBWR and the other two need for their vessels and steam generators. And they have a limited capability per year to develop these large forgings.

In our case, what we are looking at is what is their capacity, can we line up things now and what is the future for them in terms of other orders even outside our industry.

And then secondly, we are looking at our forging needs and can we look at, say, rolled plate in areas where we had just simply said it is easier to do the forgings but we will do forgings in the critical areas and the hard inspection areas and look at options for, if we need to, we can do rolled plate in those areas where it is not a problem.

So there are options.

But in addition to that, I think the fabricators are also looking at is this real? Are the number of orders that are potential real out there? And business is business. They are evaluating the incentives to do an investment in increased capacity.

And I think you will see other vendors around the world, in France and others -- Rotterdam Nuclear used to do this -- will they then reinstitute their businesses if have not moth balled them to the degree they cannot recover, but they have a number of years to recover. Will

the business opportunities dictate investment in that and competition to develop that capability?

I hear rumblings of that.

MR. GANTHNER: I would just add that I think the market will respond when the certainty is there that there are more than just rumblings of a future market and that it's real.

We are seeing a lot of interest internationally on how could we respond if it becomes real in two or three years. And obviously, we are working to be able to respond to that, and we expect that the market will respond.

MR. LIPMAN: I think you are quite right in what you bring out. And let us not forget steam generator tubing for pressurized water reactors, and let us not forget, for those of us who experienced it in the field, the variety of smaller components.

It is rare, I have been on a nuclear project where we had to wait around for steam generators. But we have sure waited around for valves, pumps and electrical gear.

So I think the whole equation of supply chain is something of great importance to all of us.

But, frankly, in addition to the market forces that you heard discussed, there is really no excuse for anything other than world class supply chain management here. And I think that's the kind of value proposition each of the vendors will compete on and look to differentiate themselves with respect to potential customers.

So it is the large forgings but it is the whole variety of supply chain activities.

COMMISSIONER MERRIFIELD: Well, in our strategic plan we use a variety of words, "effective," "efficient," "timely." We also

use the word "realistic."

I think this goes not just for the vendors but for the utilities that were at the table before. What we are being asked to do as a regulatory body is to create a staff sufficient to take a relatively large throughput and we can engender to do that.

Ultimately, that is a bill that will have to be passed off to the very same licensees. It will require an extraordinary commitment on the part of our senior management to hire and train those people so they can be effective regulators.

But it puts us in an extraordinarily difficult position if you fail to meet one of the other words that we have in our strategic plan. And that is the word "realistic."

I think everybody here has to be realistic about what they actually can meet, because if we are preparing ourselves for a certain number of applications with a certain number of bodies ready to receive them, it does not make us a very predictable or efficient regulator if we have people sitting at their desks without appropriate work to do.

As much as you want to get there on time, we want to make sure that we are there to be on time, and that will require a lot of work together.

Thank you, Mr. Chairman.

CHAIRMAN DIAZ: Thank you, Commissioner Merrifield.

I think that fundamentally, what we are seeing is a multitude of interfaces, many of them with identifiable modules. But it all is going to become an issue that will have to be resolved in a time domain, when the modules are resolved, the interfaces are resolved. And I think we all realize that things have changed.

A short time ago, it used to be that the vendors were

leading in and they were sitting pretty and they had their certified designs. And now, the reality is that that is not correct.

The utilities are now saying we need to push, we have a need and you need to come up there.

I think the tremendous role of the architect engineers needs to come in and play and play early and play well.

It is just not possible to do the things just like the suppliers that chain we were talking about that Commissioner Merrifield mentioned.

From the perspective of the Commission, we need information to put our resources in the right place, to have the people doing the right things at the right time, because we are committed to not delay these things because of our fault.

And we are going to try to be very, very open about when somebody is late, when somebody is not doing things because we are going to be putting resources, spending significant amount of monies, most of it your money but a little bit of it comes from the general revenue. But whichever money it is, it is a significant investment and it also has to be tied with the needs of the country.

So I think we have belabored it. I think this has been an excellent meeting.

I do believe that we need to leverage some of the things internationally, both the knowledge of modular construction, I think -- and I'm very pleased to tell you that Mr. Laaksonen from STUK already replied to my letter and he is ready to come and work with us and the EPR, the fact that we will able to develop similar partnerships and not only in the area of the design approval but in the area of certification of components. Multiple, multiple interfaces all of them need to be put in a

realistic way in the right time frame, and they need to be aligned.

So I'm sure this will be one of hopefully many interactions.

I do appreciate the views of the panel, the information that you have provided us. I hope that some of the concerns of the Commission have been plain.

And unless my fellow Commissioners have any additional comments, we are adjourned.

(The hearing was adjourned.)