

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE COMMISSION

In the Matter of)	July 19, 2010
)	
U.S. DEPARTMENT OF ENERGY)	Docket No. 63-001-HLW
)	
(High Level Waste Repository)	
Construction Authorization Application))	

**U.S. DEPARTMENT OF ENERGY’S RESPONSE TO THE MOTION FOR
RECUSAL/DISQUALIFICATION**

The States of Washington and South Carolina, Aiken County, and White Pine County (“Movants”), in an opportunistic and untimely attempt to disable this Commission from performing its statutory duties, have filed a Motion for Recusal/Disqualification (“Motion”) to remove Commissioners Magwood and Ostendorff from considering any issue associated with the appeal of LBP-10-11.¹ There is no basis in law or fact for this Motion, and it should be promptly denied. Indeed, in the circumstances presented here, granting the motion would be an abdication of the Commission’s duty – as a presidentially appointed and Senate confirmed body – to decide important questions of law within its jurisdiction.

The Motion does not come close to meeting the high standard for disqualification. The isolated piece of congressional testimony on which Movants rely does not establish that

¹ On July 15, 2010, Commissioner Apostolakis recused himself from considering the appeal of LBP-10-11 for reasons independent of the Motion. Thus, DOE’s response to the Motion will generally address the Motion as to Commissioners Magwood and Ostendorff.

Commissioners Magwood and Ostendorff are incapable of judging the legal issues presented in the appeal from the decision in LBP-10-11 “on the basis of its own circumstances.”²

In fact, that testimony does not even involve the issue presented here. The testimony – one question from Senator Boxer and three one-syllable answers, as requested by the Senator – is fairly read to relate to “second guessing” DOE’s *policy* decision to withdraw the Yucca Mountain license application. The Licensing Board itself declined to second-guess that policy decision and instead rested its decision in LBP-10-11 on its view as to DOE’s statutory authority. It held “*as a matter of law* that DOE lacks the discretion to withdraw the Application”³

The only issue on appeal is thus a *legal* one: the specific interplay among the Atomic Energy Act, the DOE Organization Act, and the Nuclear Waste Policy Act (NWPA), and whether the NWPA deprives DOE of its pre-existing authority to decide not to proceed with this license application. The Commissioners were not asked by any Member of Congress to opine on those legal issues. They were not asked whether DOE’s motion was authorized or consistent with relevant law, nor were they asked whether DOE had a legal basis to seek withdrawal. Additionally, none of the statutes relevant to the legal issue posed by withdrawal was mentioned in the relevant colloquy, and none of the Commissioners was asked his views as to how those statutes inter-relate as to this specific legal question.

Moreover, in other exchanges during their confirmation hearing, the Commissioners indicated that they would be objective and have an open mind on the issues within the

² *Nuclear Information and Resource Service v. NRC*, 509 F.3d 562, 571 (D.C. Cir. 2007) (“*NIRS*”).

³ LBP-10-11 at 11, n. 36 (emphasis added).

Commission's jurisdiction.⁴ Consistent with the presumption of good faith that applies here, those statements establish that the Commissioners can fairly and independently decide the legal issue posed on appeal. Nor have the Movants established that there was any congressional interference that compromised the Commission's administrative process.

Finally, the Movants bring their Motion too late. The entire predicate for this Motion, inadequate as it is, arose over five months ago. And since then, on April 23, the Commission has already issued a Memorandum and Order (CLI-10-13), in response to DOE's request for interlocutory review of a Licensing Board order suspending its consideration of DOE's motion to withdraw. None of the Movants raised this issue in their oppositions to DOE's request for review of that order, even though all the facts they currently recite were then available, and a number of these same parties opposed the relief DOE sought at that time. Motions to disqualify Commissioners must be timely raised, because "[w]ithout watchfulness on the part of courts and agencies, cynical litigants could use disqualification motions to manipulate the outcome of the judicial or administrative process."⁵

As the Commission has already recognized, DOE's motion to withdraw raises "[f]undamental questions" that are central to the NRC's mission.⁶ The Commission has a duty to act on these questions and should not be dissuaded by a disqualification motion that is brought for tactical reasons only.

⁴ Hearing of the Senate Environment and Public Works Committee, at pages 15-16, 27, 31-32 (a full copy of this Committee's transcript from Lexis is attached as Exhibit A).

⁵ *Long Island Lighting Company* (Shoreham Nuclear Power Station, Unit 1) CLI-84-20, 20 N.R.C. 1061, 1082 (1984).

⁶ *U.S. Department of Energy* (High Level Waste Repository), Memorandum and Order, CLI-10-13 (slip op. at 3-4), 71 N.R.C. ____ (Apr. 23, 2010) ("CLI-10-13").

I. The Standard For Disqualification

The Commission and federal courts have set a high standard for disqualifying either the entire Commission or individual members of the Commission. That high standard reflects that the incumbent members of the Commission are appointed by the President and confirmed by Congress to fulfill their responsibilities. As former NRC Chairman Palladino stated in *Shoreham*, it could “be argued that to recuse myself would remove the shadow of doubt in some persons’ minds about the propriety of the Shoreham proceeding, and perhaps thereby obviate some legal challenges to the ultimate outcome of the proceeding, whatever that outcome may be.”⁷ But he rejected that argument and refused to recuse himself, explaining:

I believe firmly that the responsibilities of a Commissioner are not optional. On the contrary, they are duties owed to the public in thorny and time-consuming cases as well as in easy ones. Indeed, it is in controversial cases in which it is most incumbent on Commissioners to take a stand and make the difficult decisions that are the essence of a Commissioner’s job.

. . . Moreover, under the present circumstances, for me to recuse myself would not relieve public doubt but increase it, by appearing to give credence to an accusation that aims baseless charges of impropriety⁸

The D.C. Circuit has further explained that there is a presumption that “[a]dministrative officers . . . are objective and ‘capable of judging a particular controversy fairly on the basis of its own circumstances.’”⁹ That presumption is appropriate because, in the Supreme Court’s words, senior government officials “charged by Congress with adjudicatory functions are not assumed to be flabby creatures any more than judges are.”¹⁰

⁷ *Shoreham*, 20 N.R.C. at 1062.

⁸ *Id.* at 1062.

⁹ *NIRS*, 509 F.3d at 721, quoting *United States v. Morgan*, 313 U.S. 409, 421 (1941).

¹⁰ *Morgan*, 313 U.S. at 421.

Accordingly, a “judge (or Commissioner) should disqualify himself or herself *only if* ‘a reasonable man, cognizant of *all* the circumstances, would harbor doubts about the judge’s impartiality.’”¹¹ The standard is met not by a movant’s incantation of the phrase “appearance of impartiality,” but rather where the facts objectively demonstrate that a Commissioner has pre-decided the specific facts and law relevant to the issue presented: “[A]n agency official should be disqualified *only* where ‘a disinterested observer may conclude’ that the official ‘has in some measure *adjudged the facts as well as the law* of a particular case in advance of hearing it.’”¹²

Recusal of agency officials because of the “appearance of impropriety” is thus rare. Indeed, in all of the cases the Movants cite, disqualification of an executive agency official did *not* occur, except in *Pillsbury Co. v. FTC*¹³ which, as discussed below at pages 10-11, concerned an extreme circumstance not remotely present here. In contrast, and reflective of the common treatment of this issue, the Supreme Court has held that prior statements made by commissioners of the Federal Trade Commission (FTC) to Congress that suggested that conduct that was the subject of an adjudicatory proceeding pending before them was unlawful did not warrant disqualification because it “did not necessarily mean that the minds of [the commissioners] were irrevocably closed” on the matter.¹⁴

¹¹ *In re Joseph J. Macktal*, CLI-89-14, 30 N.R.C. 85, 91 (1989) (citations omitted; emphasis added).

¹² *NIRS*, 509 F.3d at 721 (emphasis added; citations omitted); *see also Shoreham*, 20 N.R.C. at 1078, n.46 (the conclusions of the disinterested observer is the standard by which to judge a disqualification motion).

¹³ 354 F.2d 952 (5th Cir. 1966).

¹⁴ *FTC v. Cement Institute*, 333 U.S. 683, 701 (1948); *see also Metropolitan Council of NAACP Branches v. FCC*, 46 F.3d 1154, 1165 (D.C. Cir. 1995) (holding that “we will set aside a commission member’s decision not to recuse himself from his duties *only* where he has ‘*demonstrably* made up [his] mind about important and specific factual questions and [is] *impervious* to contrary evidence’”) (emphasis added; citation omitted); *Gulf Oil Corp. v. FPC*,

II. The Movants' "Evidence" Does Not Meet The High Standard For Recusal And Disqualification

The Movants' claim does not meet the high standard for disqualification. They offer only a one-question-and-answer snippet of congressional testimony that relates to the Secretary of Energy's policy decision and not the legal issues pending before the Commission.¹⁵ Read fairly and in context, Senator Boxer's question to the Commissioners is properly understood to mean that they would not second-guess the Secretary's reasons for making the *policy* decision regarding the withdrawal of DOE's license application: *in fact, when Congress held the hearing, DOE had not yet filed its motion to withdraw, so DOE had not explained its legal basis under the NWPA, AEA and DOE Organization Act for withdrawing its application.* In fact, Senator Boxer did not ask them anything about the statutory basis for withdrawal. She did not ask whether DOE has the "authority," "legal basis," or "power" to withdraw, as one would if one were interested in the legal issue now to be decided by the Commissioners. And she did not ask for a legal analysis or conclusion, refer to the relevant statutes, or in any other way ask for a view on the statutory and regulatory interpretation issues that are relevant to DOE's motion. There is thus no evidence that any Commissioner had, or appeared to have, "adjudged the facts as well as the law" relevant to this case.

Nor is the policy question as to which Senator Boxer inquired part of the legal issue on appeal. In LBP-10-11, the Board made clear that its decision did not rest on review of the policy

563 F.2d 588, 612 (D.C. Cir. 1977) ("A point of view[,] even bias induced by legislative interference as to questions of law . . . does not necessarily render invalid an agency's decision.") (citation omitted)..

¹⁵ Senator Boxer asked whether, if confirmed, each would or would not "second-guess the Department of Energy's decision to withdraw the license application for Yucca Mountain from NRC's review." Each nominee, having been instructed by the Senator to "just answer it 'yes' or 'no,'" answered "No." Ex. A, at page 16.

basis for DOE’s action, which the Board properly understood to be a distinct issue from the legal authority to withdraw.¹⁶ Such second-guessing of policy decisions by the Executive Branch, moreover, is not even within the purview of the Commission.¹⁷ The issue presented here, as the Movants have argued in other contexts and as the Licensing Board said in LBP-10-11, is only whether DOE – totally apart from policy preferences or views – can *legally* withdraw its license application under the NWPA and AEA.¹⁸

Moreover, other testimony from the Commissioners – not cited or discussed by the Movants – buttresses the conclusion that the Commissioners can fairly decide the legal issues currently pending before the Commission. Commissioner Ostendorff agreed that one of the most important challenges facing the Commission was “to be perceived as fair by all stakeholders”¹⁹ Furthermore, the Commissioners testified that they supported “openness and transparency”

¹⁶ See, e.g., LBP-10-11, slip op. at 11, n.36 (“We rule as a matter of law that DOE lacks discretion to withdraw the Application, and do not evaluate the grounds on which it purports to rely.”).

¹⁷ *U.S. Department Of Energy (Plutonium Export License)*, CLI-04-17, 59 N.R.C. 357, 374 (deferring, upon balancing “our statutory role in export licensing with the conduct of United States foreign relations, which is the responsibility of the Executive Branch,” to Executive Branch determination on an export license application); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 38 N.R.C. 454, 472 (2003) (expressing “considerable doubt” about the NRC’s authority to “second-guess” the Bureau of Land Management on an issue relating to recommendations as to the wilderness status of land, and declining to do so).

¹⁸ E.g., LBP-10-11, slip op. at 20 (“We conclude that, under the statutory process Congress created in the NWPA, which remains in effect, DOE lacks authority to seek to withdraw the Application.”); Initial Brief of the State of Washington Pursuant to the June 30, 2010 Commission Order, at 11 (July 9, 2010) (“The ASLB denied DOE’s motion to withdraw based on the fact it is precluded by the plain terms of the NWPA.”); Brief of the State of South Carolina Pursuant to Commission Order dated June 30, 2010, at 28 (July 9, 2010) (“As the Board held . . . agencies are frequently ‘required to implement legislative directives in a manner with which they do not necessarily agree.’”) (quoting LBP-10-11, slip op. at 19, n.71)..

¹⁹ Ex. A at 20.

to engender public confidence in the Commission process.²⁰ Commissioner Magwood said that it was his goal to “always do[] the right thing even when the right thing isn’t easy.”²¹ And Commissioner Ostendorff told Congress he was “committed to the NRC’s principles of good regulation – those are *independence*, openness, efficiency, clarity and reliability.”²² Viewing the Commissioners’ testimony as a whole and against the Commission and federal court decisions cited by Movants, it is clear that the Commissioners are committed to addressing legal issues fairly and independently. Disqualification is thus not warranted and would be inappropriate here.

That conclusion is strongly supported by the *NIRS* decision. There, NIRS sought to disqualify Commissioner McGaffigan from a licensing proceeding where he had made extra-judicial statements, declaring that NIRS relied on “‘factoids or made-up facts or irrelevant facts’ to support its positions, and that one of its expert witnesses was a ‘person who doesn’t know anything about radiation.’”²³ He also called NIRS the “Nuclear Disinformation Resource Service.”²⁴ Despite these extra-judicial statements, the court held that they did “not support the conclusion that Commissioner McGaffigan had ‘adjudged the facts as well as the law’ regarding the particular license application at issue here.”²⁵

²⁰ *Id.* at 15-16.

²¹ *Id.* at 14.

²² *Id.* at 15 (emphasis added).

²³ *NIRS*, 509 F.3d at 571.

²⁴ *Id.*

²⁵ *Id.*

The statements at issue here similarly do not show that the Commissioners have prejudged the specific legal issues presented in this case. Regardless of their view as to the propriety of second-guessing DOE's policy decision to withdraw the license application, the Commissioners' testimony does not mean they cannot determine objectively whether *as a matter of law* the Secretary may effectuate the policy of withdrawing the license.

In any case, this testimony, even if one were to disagree as to the nature of the question asked, especially when read in the context of the Commissioners' clear statements as to the importance of fairness and independence, cannot remotely establish that "the minds of [the Commissioners] were irrevocably closed" on the matter.²⁶ Nothing in the Commissioners' one-word responses suggests that they were not open to legal argument as to the appropriate understanding of the NWPA and other relevant statutes. None of this shows that the Commissioners have "*demonstrably* made up [their] mind[s] about important" issues before them "and are *impervious* to contrary evidence."²⁷

Movants also attempt to rely on media articles written in the wake of the Commissioners' confirmation to support disqualification.²⁸ Regarding the use of press articles to support judicial disqualification, the D.C. Circuit has held that it "seriously question[s] whether a [media] article is admissible evidence of the truthfulness of its contents, *see* Fed.R.Evid. 802 . . . and 801(c) (hearsay defined as a 'statement, other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted.')." ²⁹ Likewise, the

²⁶ *Cement Institute*, 333 U.S. at 701.

²⁷ *Metropolitan Council*, 46 F.3d at 1165 (internal quotations omitted; emphasis added).

²⁸ Motion, Ex.3 (two of the three articles attached are editorials from The Seattle Times).

²⁹ *Metropolitan Council*, 46 F.3d at 1165.

media articles that the Movants attach are inadmissible hearsay evidence that the Commissioners “are not impartial.”³⁰ In all events, it is hardly surprising that two *editorials* from a Washington State newspaper are hostile to DOE’s policy and want to see Movants prevail at the Commission.

But, as in *Metropolitan Council*, even if the articles were considered, their content adds nothing to the question of whether the Commissioners have prejudged the precise legal issues before the Commission. Again, none of this “evidence” shows, or appears to show, that the Commissioners have “*demonstrably* made up [their] mind[s] about important” issues before them “and are *impervious* to contrary evidence.”³¹

III. There Is No Improper Congressional Influence

The Movants’ suggestion that there was undue congressional influence over the Commissioners likewise fails, because the colloquy at the hearings did not amount to an improper intrusion into matters before the Commission. Senator Boxer’s subsequent one-line comment as to how *she thinks* Senator Reid *might* react to the Commissioner-nominees’ testimony³² does not establish that either Senator exerted improper influence over the Commission’s decision-making in this matter or that the Commissioners will not otherwise faithfully apply the law to DOE’s pending motion to withdraw.³³

Senator Boxer’s single comment and her question stand in stark contrast to the questioning of the Commissioners of the FTC by the House and Senate’s antitrust Committees

³⁰ Motion at 5.

³¹ *Metropolitan Council*, 46 F.3d at 1165 (internal quotations omitted; emphasis added).

³² Ex. A at 16.

³³ *E.g., ATX, Inc. v. United States Dep’t of Transp.*, 41 F.3d 1522, 1528 (D.C. Cir. 1994) (among other things, courts must evaluate “the relation between the communications and the adjudicator’s decisionmaking process” to see if Congress has shaped an agency’s determination).

reviewed and cited at length in *Pillsbury*. In *Pillsbury*, House and Senate committee members subjected sitting FTC Commissioners to hostile, prolonged, and probing questions criticizing the FTC’s handling of a then-pending matter.³⁴ Congress’ interrogation in *Pillsbury* constituted a “searching examination as to how and why [the FTC] reached [a] decision in a case still pending . . . and to criticize [the FTC] for reaching the ‘wrong’ decision”³⁵ The court’s concern in *Pillsbury* was Congress’ intrusion into *factual* issues still pending at the FTC,³⁶ and it was clear that Congress intended to directly influence the outcome of those issues pending at the FTC.³⁷

In contrast, during the Commissioners’ hearing, the committee members engaged in no hostile, probing, or prolonged questioning on the facts or applicable law associated with DOE’s motion to withdraw. The single response and reply cited by Movants constitute the entirety of the discussion with the witnesses about the Yucca Mountain project.³⁸ Senator Boxer’s question and her belief about how Senator Reid would feel about the Commissioners’ answers to her question do not show an effort to influence the Commissioners on any legal issue pertaining to DOE’s motion to withdraw – which had not been filed when Senator Boxer asked her question. In further contrast to *Pillsbury*, there are no factual questions pending before the Commission; DOE’s motion raises a purely legal question.

The Commission need not look beyond its own analysis in *Macktal* and *Shoreham* to make that conclusion. Both cases involved claims that the Commission or specific

³⁴ See *Pillsbury*, 354 F.2d at 957-62.

³⁵ *Id.* at 964.

³⁶ *Gulf Oil*, 563 F.2d at 611-12.

³⁷ See *Pillsbury*, 354 F.2d at 957-62, 964.

³⁸ Yucca Mountain is referred to only one other time in the entire hearing, in passing, again by Senator Boxer. Ex. A, page 2.

Commissioners should be disqualified due in part to isolated congressional statements. In both cases, the Commission declined to disqualify.³⁹ The Commission held in *Macktal* that even “in cases involving congressional scrutiny and criticism of, or comments on, agency proceedings, a high threshold must be met” for disqualification.⁴⁰ As in those decisions, the Commissioners’ isolated statements and Senator Boxer’s comment are not enough for disqualification.⁴¹

IV. The Motion Is Untimely

The Commissioners should also deny the Motion because the allegations of bias were not made promptly. At the latest, the Movants should have raised this issue shortly after April 12, 2010, when DOE sought Commission review of the Board’s unilateral suspension of this proceeding, and several of the Movants opposed DOE’s request.⁴² Yet the Movants did not utter one word about this issue then. Their Motion should thus be rejected because disqualification is not an issue that litigants can spring at the last moment to prevent the Commissioners from performing the duties for which they were appointed and confirmed.

“It is well-established in the case law on the timeliness of disqualification motions that such requests must be filed at the earliest moment after the moving party obtains knowledge of the facts demonstrating a basis for disqualification.”⁴³ This requirement is “not mere procedural nitpicking. On the contrary, it is a matter of preserving the integrity of the adjudication,”

³⁹ *Macktal*, 30 N.R.C. at 94; *Shoreham*, CLI-84-20, 20 N.R.C. at 1062-63.

⁴⁰ *Macktal*, 30 N.R.C. at 94.

⁴¹ *Id.* (“[T]he discussion between members of the subcommittee and [the Commission] never approached the level held to be prejudicial in *Pillsbury* and its progeny.”).

⁴² Aiken County, Washington, and South Carolina filed oppositions to DOE’s petition for interlocutory review on April 16, 21, and 22, 2010, respectively.

⁴³ *Shoreham*, 20 N.R.C. at 1081 (citations omitted).

because to hold otherwise would allow “cynical litigants [to] use disqualification motions to manipulate the outcome of the judicial or administrative process.”⁴⁴

If the Movants had real concerns about the Commissioners’ alleged bias, then they should not have sat on their hands. These issues could have been raised when the Commission was first asked in April to weigh in on the withdrawal proceedings. Instead, Movants chose to “wait and see” what the Commission would do with DOE’s petition seeking interlocutory review, and, then, what the Board would do with DOE’s motion to withdraw. Only now that the Movants have a decision they like from the Board have they sought to prevent the full Commission from considering the important issues in this case. The Commission should reject this opportunistic tactic.⁴⁵

V. Conclusion

The Commission should deny the Motion.

⁴⁴ *Id.* at 1082.

⁴⁵ *Id.* at 1082-83.

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CERTIFICATE OF SERVICE

I hereby certify that copies of the U.S. DEPARTMENT OF ENERGY'S RESPONSE TO THE MOTION FOR RECUSAL/DISQUALIFICATION have been served on the following persons on this 19th day of July 2010 through the Nuclear Regulatory Commission's Electronic Information Exchange.

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EXHIBIT A



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SUBJECT: NOMINATIONS;

CHAIR BY: SENATOR BARBARA BOXER (D-CA);

WITNESSES: GEORGE APOSTOLAKIS, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION (NRC); WILLIAM MAGWOOD, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION; WILLIAM CHARLES OSTENDORFF, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION;;

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BODY:

HEARING OF THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
SUBJECT: NOMINATIONS CHAIRED BY: SENATOR BARBARA BOXER (D-CA) WITNESSES: GEORGE APOSTOLAKIS, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION (NRC); WILLIAM MAGWOOD, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION; WILLIAM CHARLES OSTENDORFF, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGULATORY COMMISSION; LOCATION: 406 DIRKSEN SENATE OFFICE BUILDING, WASHINGTON, D.C. TIME: 10:00 A.M. EST DATE: TUESDAY, FEBRUARY 9, 2010

SEN. BOXER: (Sounds gavel.) Good morning, everybody and we all get -- (inaudible) -- because this was -- Senator Inhofe and I decided we're going to come to work and we're going to do our job. I really want to thank him and his staff, and it's nice to see Senator Alexander here, Senator Cardin, Senator Carper.

And -- the EPW committee moves forward when others fear to tread. So here's where we are. Senator Webb is coming to introduce Mr. Ostendorff. Senator Cardin has asked to introduce Mr. Magwood. I will introduce Dr. Apostolakis.

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So I think we're going to do this. We're going to do our little opening statements. And then we'll get to Senator Webb and the others. So I'll start it.

We're holding a hearing on the nomination of three individuals to be members of the NRC, the Nuclear Regulatory Commission. The NRC is an independent agency created by Congress to regulate commercial nuclear power plants and the use of nuclear materials through licensing, inspection and enforcement.

By statute, the NRC is charged with protecting health and safety and minimizing danger to life or property. The Atomic Energy Commission, which was established in 1946, was the predecessor to the NRC. The AEC was charged with both encouraging the use of nuclear power and regulating its safety.

This dual role created conflicts within the agency and AEC's regulation came under increasing attack for not being rigorous enough. As a result, in 1974, Congress abolished the AEC and created the NRC as an independent regulator of commercial nuclear power.

The promotional work of the AEC was moved to a separate agency, which ultimately became the Department of Energy. The NRC was created to be a strong, independent regulator.

I'm going to put my whole statement in the record. But I do believe that when the president talks about transparency and accountability, it's very relevant to regulators like the NRC. And I urge the commission to become even more transparent.

We know the issues are complicated, but public involvement and support in the process is very important. I applaud the decision that the administration made due to the scientific reports they want to look for another site over in Yucca, and so we definitely have a lot of work on our plate.

In addition to its work regulating nuclear waste, I expect a review of combined construction and operating licenses for new nuclear power plants will occupy a good portion of the NRC's time. Given that the nuclear industry has increasing interest building new nuclear plants, I expect ARC will work very hard to ensure that they move forward, and that the safety of the new plants and the designs of the new plants will never be questioned.

So you also have the job of looking after existing facilities. We know some of them -- many of them are aging. They need license renewals; you've got to look at all of those. So I think the American public has the right to expect the very best public servants in your positions. And I really -- I congratulate you on your nominations. I'm excited that we can move forward on this front.

And with that I would yield the balance of my time and turn to Senator Inhofe.

SEN. JAMES M. INHOFE (R-OK): Thank you, Madame Chairman, and -- I had a chance to meet all three of the nominees, and I'm enthusiastically supporting all three of them. I was glad to hear that President Obama is now embracing nuclear energy as crucial to our energy, security and economic prosperity; I couldn't agree more.

It's -- nuclear energy is plentiful, it's cheap, it's safe and it's clean. We're all very aware of the national economy, how it drastically has changed since the first application for a new reactor was filed. That was September of 2007.

These changing economic circumstances forced the U.S. utilities to continually assess electricity demand and their options for meeting it. As with any other business, they must make these decisions in real time in response to changing market conditions.

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NRC is insulated from the challenges of responding to those dynamic conditions. Regulatory decisions making -- the decision making should not be pressured by economic conditions. The NRC's mission to ensure safe -- safety, however, does not absolve the agency of responsibility to regulate in an efficient and predictable manner.

The NRC has -- now has 2 years of experience with reviewing new plant applications. Yet still no -- there's not indicated dates when applicants can expect to reach -- receive their license. I think this is one thing that we'll all want to be asking you is, you know, how quickly can we move. Things do tend to go slowly in government as we get new nominees in that will be running things.

I hope they'll concentrate on getting things done rapidly. I can remember it was 1997 when I first became chairman of the subcommittee called the Clean Air Subcommittee that had jurisdiction over the nuclear -- the NRC. At that time, it had been 8 years since we had had an oversight hearing.

So we started having oversight hearings every other month with expectations, with guidelines as to what would -- should be expected. And that's what I think we'll do, and that's what I want to get to this morning to see what we can do to speed these things along with these new applications.

The chairman mentioned the renewals, but we also have new applications, which we want to move along rapidly. So the time is right, I'm glad we all weathered the storm to get here and get you guys confirmed.

Thank you Madame Chair.

SEN. BOXER: Senator, thank you. I wanted to mention, our other nominees from TVA, they asked for -- to continue this to -- after the (new snows ?) fall. So as I understand it, that will not be happening this week on their request. Because they just -- they expect big snows and they asked us to --

SEN. LAMAR ALEXANDER (R-TN): Well, Madame Chairman.

SEN. BOXER: Yeah.

SEN. ALEXANDER: Two of them are here; they flew up on the plane with me this morning and their families are coming too.

SEN. BOXER: I guess we could do those two then if you wish. Would you like us to -- I'm happy to do those two, but we might want to do that today, because I'm very fearful about what's coming tonight and tomorrow. So would you like -- can you get in touch with them, Senator?

SEN. ALEXANDER: I can try. What time would you like to do it?

SEN. BOXER: Well, why don't we do this, why don't we --

SEN. ALEXANDER: I don't want to substitute my judgment for theirs or yours on this, but I just know they're here and --

SEN. BOXER: Well, I was told that the nominees had asked that it not go forward. But if there are two here with their families, I think we ought to hear from them. Why don't we do this, why don't we go through where we are? I will come and talk with you in the room out there, and we'll figure out a way to get in touch with them.

SEN. ALEXANDER: Great. I thank the --

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MR. : Madame Chair.

SEN. BOXER: (Cross talk) -- they may not be able to get home if they don't get home tonight.

MR. : (Off mike.)

SEN. BOXER: Yeah, I was thinking maybe this afternoon's (hearing ?), okay.

SEN. ALEXANDER: Okay, Laura Haynes (ph) who's sitting right behind me says, she believes that the two nominees that may be flown up with Senator Alexander may be flying home as we speak. But we'll find --

SEN. BOXER: Okay. Well, we'll check this out, because I know I'm -- I lived six blocks away, so I can get here in any blizzard.

SEN. ALEXANDER: Maybe we can do this at the airport.

SEN. BOXER: We can do this at the airport, right that's good. Well, we'll figure this all out. But getting back to our nominees who are here and our wonderful senator who's joined us to do an introduction, let's move forward with Senator Cardin, then Alexander, then Carper, then Voinovich.

SEN. BENJAMIN L. CARDIN (D-MD): Madame Chair, let me -- thank you very much for holding this hearing this morning. I want to thank all the witnesses for being here and their willingness to serve on the Nuclear Regulatory Commission.

The Nuclear Regulatory Commission was established in 1974 as an independent agency protecting the health and safety and minimizing danger to life or property. We have three of the nominees before us today.

Considering it's a five-member commission, the three of you will have a major impact on the future decisions related to nuclear power in this country. So I think this hearing is particularly important.

We depend upon the independent oversight authority that you have to provide accountability that this nation deserves. There may be different views among members of the United States Senate as to the future use of nuclear power and our energy policy. But regardless of one's view, I think we all agree that we want a strong, independent oversight agency. And we very much depend upon the commission to provide that.

I'm a proponent of nuclear power. I believe that we need to be more aggressive in the use of nuclear power in the United States to lessen our dependency on carbon based electricity generation. The NRC has a record number of applications in front of it; the president has just announced his plan to increase the guarantee loan for the industry to a record amount.

So I think we stand on the cusp of a nuclear renaissance. But to make that promise a reality, we need a commission that is fully staffed and hard at work. And that's why I'm particularly pleased, Madame Chair, that we have this hearing today to deal with the three nominees that are before us. I look forward to their testimony and I look forward to working with the commission in the best interests of the United States.

SEN. BOXER: Thank you. Senator Alexander.

SEN. ALEXANDER: Thank you, Madame Chair.

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I -- the chair has heard me express, over the last year, my concern that the United States is pursuing what looks like a national windmill policy, which is the energy equivalent of going to war in sailboats. However, I want to congratulate President Obama for the last couple of weeks of leadership that he has shown on nuclear energy.

The president's view is terribly important here, because the government is not going to build these plants. The utilities are going to build them, and the ratepayers are going to pay for them. So it's up to the president and all of us to try to create an environment in which that can happen. Senator Webb and I have cosponsored legislation to try to create an environment in which we could double nuclear power production in the United States as well as encourage other forms of clean energy.

So the president's statement in the State of the Union address about a new generation of nuclear power, his support for \$54 billion of loan guarantees, the quality of the three commission members who are before us -- unless I have really completely missed my bet, I think it will be difficult for the president to find three better nominees for this position -- people who are experienced, who will make sure the plants are safe, but who see the value of them to our country.

The quality of the appointees of the president's commission -- members to the new commission on what we do with used nuclear fuel is excellent and should be also an encouraging sign. And of course Dr. Chu's advocacy and leadership over the last year, all add up to several steps that we're taking to getting us back into the ballgame. We have a way to go.

Senator Webb and I in our bill make our -- the loan guarantees technology neutral, so that any clean energy can do that. And I'd like for our subsidies and policies and -- and the renewable energy standards all to be low-carbon standards, so that we let the marketplace pick and choose among the available forms of energy. But I'm very pleased to be here.

China is -- and to be here on a day that -- with these three nominees. I look forward to asking some questions at a time when China is starting a new nuclear plant every three months. Japan is a third nuclear power. France is 80 percent. Even the UAE is building nuclear power plants and making plans too. The United States, who invented the technology, should create an environment in which we take our invention and use it for our own benefit.

I can think of nothing more important to job creation than lots of low-cost, clean, reliable nuclear energy. And I hope these three commissioners will help create an environment where that happens. And I commend the president for his nominees and his other actions.

SEN. BOXER: Thank you.

I understand that Senator Webb has to leave shortly. So -- he's here to introduce Mr. Ostendorff.

So if Senator Carper wouldn't mind yielding to Senator Webb, and then we'll get right to you. But I understand, Senator Carper, you had a relevant announcement to make.

SEN. THOMAS RICHARD CARPER (D-DE): I had a question first for Senator Webb. Do you recall what you were doing 64 years ago today?

SEN. JAMES WEBB (D-VA): Not specifically, but my mother, I think, still has some recollection. (Laughter.)

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SEN. CARPER: I just want to thank our witnesses and our nominees and everybody present for joining us for the celebration of the 64th anniversary of the birth of Senator Webb. Welcome.

Congratulations. Happy birthday.

SEN. BOXER: Congratulations, Senator Webb. Happy birthday. (Applause.)

SEN. WEBB: Thank you.

SEN. BOXER: Now that we've thoroughly embarrassed you, the honor of introducing Mr. Ostendorff falls on your shoulders. So go ahead.

SEN. WEBB: Thank you, Madame Chairman. I'll see if I can find my place in my notes here after that.

And also Ranking Member Inhofe and members of the committee, it's with a great deal of pleasure that I'm introducing William Charles Ostendorff, and also giving him my strongest recommendation here to become a member of -- commissioner of the Nuclear Regulatory Commission.

As Senator Alexander so aptly stated, I am one of those who believe it's critical that the United States accelerate its deployment of nuclear energy. In doing so, we require effective leadership and cooperation at the Nuclear Regulatory Commission. I'm very pleased to have discussed this proposition with a number of members of this committee.

And I believe the bill that Senator Alexander and I introduced at the end of last year is achievable, measurable and good for the country. And in that respect, Mr. Ostendorff has clearly demonstrated the skills and experience necessary for this position. He has had an exceptional career in the Navy, in the Department of Energy, the Congress and at the National Academies.

And I would say again, Madame Chair, it's -- given the fact that it's my birthday, it's nearly a coincidence that Mr. Ostendorff and I both went to the naval academy and both went to Georgetown law school. We probably didn't go to the same naval academy. The disparity in the academic areas of the naval academy while we were there were pretty dramatic between the people who went into the Marine Corps and the people who went into the Nuclear Power Program.

We all were required to obtain an engineering degree. But those of us who were on the Marine Corps side, and we used to carve into our desks, "Entropy is alive and living in Argentina." But the people who were on Mr. Ostendorff's side actually understood what entropy was.

He also served on six different submarines -- I can say I had a pretty hard infantry tour in Vietnam, but you could not have put a gun -- put a gun to my head and made me go on a submarine -- six different times, including command of the USS Norfolk attack submarine.

Among other accomplishments in the Navy, he commanded 1,200 men and women of Submarine Squadron Six based in Norfolk, Virginia. Then after retiring from the Navy, Mr. Ostendorff joined the Strategic Forces Subcommittee of the House Armed Services Committee, serving as counsel and staff director with oversight responsibilities of various Department of Energy activities.

And after Senate confirmation in 2007, he became principal deputy administrator of the National Nuclear Security agency where he served until 2009 at which time he became director of Committee of Science, Engineering and Public Policy at the National Academies. The range and breadth of this experience, I think, make him superbly qualified to serve as commissioner of the Nuclear Regulatory Commission.

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He and his wife Chris, who is a special education teacher, are now residents of Oakton, Virginia. She is here today, as I think, two of your three children -- if they would like to stand. There's -- daughter Becky (ph) is an attorney in New York City. One son, Chuck (ph), is an Army captain who deployed to Iraq with the 2nd Stryker Cavalry Regiment and is now stationed at Fort Sill, Oklahoma. And son, Jeff (ph), is a student at Marymount here in Arlington, Virginia.

So with that, Madame Chair, members of the committee, I look forward to his confirmation and to working with him and others as we move into a new era of nuclear energy development in our country. Thank you very much.

SEN. BOXER: Senator, thank you. I know that you have to leave us, but we do wish you a happy birthday.

Senator Carper.

SEN. CARPER: Thanks. Thanks, Madame Chair.

Let me say to our witnesses welcome. It's nice to see each of you again. Thank you for -- not just for showing up today, but for showing up in all those years of your lives in preparing yourselves for this potential assignment. Dr. Apostolakis, Mr. Magwood, Captain Ostendorff, when you are introduced to speak, you may want to -- if you have family members are here you may want to introduce them and let us say hello to them as well, as you begin your remarks.

I am -- like Senator Alexander, I am impressed by the technical breadth and the depth of these three nominees, and really the complementary set of skills that they would each bring to the commission if confirmed. This is -- the word "synergy" -- you know, synergy is oftentimes used and this -- I think we have some real synergy here in terms of the potential that each of you bring collectively to the commission.

And as chairman of the Senate Clean Air and Nuclear Safety Subcommittee, ensuring that nuclear power industry functions safely is a top priority of mine. I expect them -- the public expects that the NRC must be a strong and independent and an effective regulator, a regulator that acts firmly, a regulator that acts decisively and a regulator that acts openly and transparently, a regulator that produces results and is worthy of the public's confidence.

In sum, the NRC must ensure our nation's health, our safety and security and the protection of the environment. I'm tempted to say we cannot afford any mistakes. Actually, we all make mistakes. I think it's Richard Nixon who used to say, the only people who don't make mistakes are the people who don't do anything. And we make mistakes in the work that we do here in the Senate, and I'm sure mistakes are made at the NRC and at the nuclear power plants that they regulate.

What we can't afford are mistakes that will derail this renaissance in the nuclear power. What we can't afford are mistakes that are made and covered up at nuclear power plants. What we can't afford are mistakes that are made again and again and again because no one's reported them and actions haven't been taken to correct them -- those mistakes.

But as you know, we have many challenges before us, including ensuring that our current fleet continues to operate safely, are reviewing applications to build new reactions -- new reactors. And I might add also we have a bunch of nearly 40-odd power plants that are going to be -- are already in the queue for being reviewed and hopefully extended -- have their lives extended for another 20 years if they merit that.

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But if each -- if you all are confirmed, and I hope you will -- each of you will be in a role of the utmost importance, acquiring the highest public level of trust. I want to thank you for being here and for -- not just for your willingness to serve your country, but I think each of you already served your country in a wide range of ways, and that we're happy that you're willing to serve your countries again.

I want to express our thanks to your families, some of whom are here, some of whom are not, for their willingness to share you with the rest of us in this country in the years to come. What I hope to hear from each of you is a strong statement of your commitment to making the NRC, which is already a great place to work, best in the federal government, not only making the NRC a great place to work, but a strong and impartial regulator.

I close with this. Sometimes I think of your roles as -- just imagine driving a car, something most of us do, and we have two feet. And in -- as we move to a renaissance in nuclear energy, we need one foot on the accelerator to make sure that we move forward expeditiously, to realize this green -- this vision, and we need another foot tapping that break and -- when it's appropriate.

And so there are plenty of people with their foot on the accelerators, including some of us. We need to make sure we got somebody there responsibly tapping that break when it needs to be tapped. But thank you very much for your willingness to play that role. Thank you.

SEN. BOXER: Thank you, Senator.

Senator Voinovich.

SEN. GEORGE V. VOINOVICH (R-OH): Yeah. Thank you, Madame Chairman and Ranking Member Inhofe for holding this hearing today.

And I'd like to welcome the nominees today and their families.

Madame Chairman, as you know, I've spent the better part of the last 10 years in the Senate involved in shaping nuclear energy policy for this country mainly as chairman or the ranking member on the Senate's Clean Air and Nuclear Safety Subcommittee. We focused a great deal of time and effort on the committee chair on oversight of the Nuclear Regulatory Commission to make sure it was doing its job of ensuring the safety and security of our nation's nuclear power plants.

I take pride in the fact that this committee has transformed the Nuclear Regulatory Commission into one of the best and most respected regulatory agencies in the world. We worked very hard placing the right people on the commission, providing the commission with the resources and tools necessary to do its job and holding them accountable for results.

We held over 40 or 20 productive hearings involving the NRC over the last eight years. So it's no accident that we have seen a dramatic improvement in both the safety records and reliabilities of the 104 operating reactors today, compared to a decade ago.

And I would like to take this opportunity to thank and recognize each of the existing members of the commission -- Chairman Jaczko, Commissioner Svinicki and soon departing Commissioner Klein and all the other commission members that have served so -- with great distinction.

Being a regulator is often a thankless job, whether it's the NRC, FAA, FDA or the Federal Reserve Board. It seems as though the only time people care about what you do is when something goes wrong. And it's almost always easy to criticize what you did. Indeed, a regulator's job is a complex and difficult one.

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NRC has to be vigilant at all times, keeping its regulatory threshold just right. It should be rigorous enough to prevent complacency from setting in both within the agency and the industry it regulates -- and we've seen that several years ago -- but not overly restrictive to a point of stifling the growth of nuclear power in this country at a time when we need it most.

And our country does not need nuclear power and the jobs -- and our country does need nuclear power and the jobs, the energy security and the environmental benefits it provides. I tell people that nuclear power is a three-fer -- it provides base load electricity, it's emissionless and environmental benefits, the jobs and reliable energy.

With President Obama's recent call for increased use of nuclear power in the State of the Union address and the DOE's Fiscal Year '11 budget request for an additional 36 billion (dollars) for nuclear loan guarantees, I think that the momentum is building, and the policy environment in the United States is shifting itself to the long-awaited growth in nuclear power.

And Senator Carper and I have been talking about the nuclear renaissance for quite some time, haven't we, Senator Carper?

You guys are coming in at the right time -- (laughs.) But I think this is important. Having a fully staffed NRC commission is paramount to maintaining our safety goals. And it's not just our large existing light water fleet but the new light water reactors, modular reactors and even Generation IV reactors.

Upon their successful confirmation, these new commissioners will become part of what, I believe, will be the busiest commission in decades, and they will likely oversee real movement in the U.S. nuclear renaissance. I believe these nominees are exceptional individuals, all leaders on nuclear technology issues. And they have the depth and breadth of experience necessary to successfully lead the nation's commercial and nuclear industry.

Their dedication and professionalism will be needed now more than ever, and I wish you all very, very well. I'm not going to be around -- I shall leave after the end of this year. I'll be around, but I'm not going to have this job. (Laughter.)

What I can tell you is that I'm going to be watching the commission -- (laughs) -- doing everything on the outside to promote the nuclear industry in this country.

Thank you, Madame Chairman.

SEN. BOXER: Thank you so much.

Senator Klobuchar, and then we're going to get right to our panel.

SEN. AMY KLOBUCHAR (D-MN): Thank you very much, Madame Chair. And thank you for holding this hearing.

My other hearings today were canceled except for Environmental Protection, and my staff remarked it was only the senator from California who would decide to hold this hearing. But I think it's great --

SEN. BOXER: And the senator from Oklahoma.

SEN. KLOBUCHAR: -- Oklahoma because they're -- I finally decided -- I once was snowed in in Yosemite Park, so I know you're used to snow, and Oklahoma is used to its share of bad weather, so. I thank you from the state of Minnesota for doing this where things would have been working a

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little more easily in our state with this storm. But it is what it is. I am pleased you've convened this hearing as my colleagues have said, and congratulate the three of you.

You certainly, as Senator Voinovich noted, are coming in at an exciting time for nuclear energy. There is just so much interest all over this country. As was noted, the president called for a tripling of the Department of Energy's Loan Guarantee Program for nuclear energy from 18 billion (dollars) to 54 billion (dollars).

We have Senators Kerry, Graham and Lieberman working on our bipartisan energy bill which is -- which sees nuclear as a major focus. And we know that the rest of the world is moving to a low-carbon economy, and nuclear energy will be a major part of that.

This nuclear renaissance means America has an opportunity to lead the world in developing new technologies to deal with the problems at hand, which include plant safety and waste storage and disposal and issues regarding security and the proliferation of nuclear material.

This last April I was in Japan with Senator McCain and Senator Graham. And we visited one of the nuclear facilities there, and I was able to see firsthand a lot of the advancements that have been made in other countries. So I'm looking forward to us doing the same, and in fact taking more of a leadership role.

I'm excited about what you're doing. I'm looking forward to hearing from you today. We know this is not an easy road. But you're coming in at a time where, for the first time, you see much more unity behind this idea of moving forward with nuclear. Congratulations on your nominations, and I look forward to hearing from you. Thank you.

SEN. BOXER: Thank you so much.

An update on TBA -- (laughs.

) Senator Alexander and I are going to work together on this. Senator Inhofe has stated whatever we decide is good. So right now, what we're going to do is if anyone is remaining in Washington, our goal would be to hold a hearing around 5:00 at the latest if they are here. If they've gone home, obviously they've gone home.

But if they are stuck here, we will accommodate them. I do not want to do it tomorrow, because our understanding is it's going to be very difficult to get here. So it'll either be at 5:00 tonight, or we'll put it off until the week after recess.

I'm going to introduce Dr. George Apostolakis and I -- is -- did I say that right? And then Senator Cardin is going to introduce Mr. Magwood, and we're going to get started.

Dr. Apostolakis is a professor of nuclear science and engineering and a professor of engineering systems at MIT. He is also a member of the Nuclear Regulatory Commission's advisory committee on reactor safeguards which advises the commission on technical matters related to the safety of nuclear reactors.

Prior to becoming a professor at MIT, he was a professor at the University of California, Los Angeles, in my home state. He received his Ph.D. in engineering science and applied mathematics from the California Institute of Technology. Dr. Apostolakis' research and his teaching interests are focused on risk assessment and risk management in the nuclear industry.

And Doctor, you're joined today, I understand, by your wife Victoria.

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Victoria, would you like to stand? We welcome you very much. Thank you for making the trip.

And we want to welcome you, sir. And I look forward to a speedy confirmation of all of our panel.

So we'll go next to Senator Cardin.

SEN. CARDIN: Well, Madame Chair, thank you very much.

It is my honor to introduce Bill Magwood. But first let me thank all three of the nominees. Each of you share an extraordinary background and a commitment to public service, and we thank you. We know it's a sacrifice not only for you but your family. So we thank your family members for sharing in the sacrifice of public service, and we welcome all three of you to our committee.

I'm really honored to introduce a fellow Marylander, Bill Magwood. Mr. Magwood lives in Colesville, Maryland. He's lived there since 1989. He's been a resident of Montgomery County for more than 20 years coinciding with his service to the federal government and several industry organizations devoted to nuclear energy policy.

He was the longest serving head of the United States civilian nuclear technology program, serving two presidents and five secretaries of Energy from May 1998 until he stepped down on May 24, 2005. Since then, he has been in the private sector. So he gives us both the governmental experience and the private sector experience in nuclear energy.

As the director of nuclear energy with the U.S. Department of Energy, Mr. Magwood was the senior nuclear technology official in the United States government, and the senior nuclear technology policy adviser to the secretary of the Energy. From 1984 to 1994, he managed electric utility research and nuclear policy programs at the Edison Electric Institute in Washington, D.C.

And he was a scientist at the Westinghouse Electric Corporation in Pittsburgh. Mr. Magwood holds a B.S. degree in physics and a B.A. degree in English from Carnegie-Mellon University, and he also holds an M.F.A. degree from the University of Pittsburgh, my alma mater. Mr. Magwood has been a staunch proponent of nuclear power technology in the United States.

Among other efforts, he led the creation of the Nuclear Power 2010 initiative, which remains the cornerstone of this nation's new nuclear power plant efforts. I think that it's critical to have Mr. Magwood's type of experience at the Regulatory Commission.

I know that he will take that experience and use it in the best interest of the United States, providing the type of oversight that's needed. During today's hearing, we'll hear from Mr. Magwood about his intents to change his role from that of an expert industry proponent to that of an expert industry overseer.

Mr. Magwood, welcome. And we thank you very much for your public service.

SEN. BOXER: Thank you all.

And we'll start with Dr. Apostolakis.

MR. APOSTOLAKIS: Chairman Boxer, Ranking Member Inhofe and committee members, it is an honor to appear before you today as President Obama's nominee for the Nuclear Regulatory Commission.

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I will first tell you a few things about myself, and then I will offer a few thoughts about my role as a commissioner, if confirmed. Before I start, I'd like to acknowledge the presence of my wife, Victoria.

I came to the United States from Greece in 1969 to get my Ph.D. at the California Institute of Technology in Pasadena, California. In 1973, I was granted the degree and joined the UCLA School of Engineering where I went through the ranks of assistant, associate and full professor. I became an American citizen in 1979.

In 1995, I moved to the Massachusetts Institute of Technology in Cambridge, Massachusetts, where I'm currently professor of nuclear science and engineering and professor of engineering systems. My broad research area is the development of models for risk assessment of large technological systems, primarily nuclear power plants.

I have served on numerous peer review committees for risk assessments performed for the NRC, NASA and National Laboratories. I have received several awards from the American Nuclear Society and the Society for Risk Analysis. I was elected to the National Academy of Engineering in 2007.

An important development in my career that is relevant to my nomination is my appointment to the NRC's Advisory Committee on Reactor Safeguards, ACRS, in 1995. This statutory committee advises the commissioners on technical matters related primarily to the safety of nuclear reactors. I chaired the ACRS in the period 2001-2002.

I have been chairman of the Subcommittee on Reliability and Probabilistic Risk Assessment continuously since 1995. At various times, I have also chaired the Subcommittees on Human Factors and on Digital Instrumentation and Control. This experience has been very valuable to me. I have appreciated the dedication and professionalism of the NRC staff.

I have also appreciated the value of conducting all ACRS meetings in public and interacting with all stakeholders. I have seen the diverse technical issues that the agency must deal with on a routine basis. I have also been afforded the opportunity to influence the staff's technical work.

I am particularly proud of the contributions I made to the agency's efforts to risk-inform its regulations that led to the landmark Regulatory Guide 1.174, and to successful risk-informed initiatives such as the risk-informed in-service inspection program. If confirmed, I look forward to applying my academic expertise as well as the experience from the ACRS to regulatory and policy matters before the commission.

However, I fully realize that the commission's role is different from that of the ACRS. If confirmed, I intend to commit myself to help the commission fulfill its mission to "license and regulate the nation's civilian use of byproduct, source and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security and protect the environment."

I believe that the increased use of risk information serves the agency in several respects. It improves safety and makes the regulatory process more transparent, thus enhancing public confidence in the commission. It also promotes regulatory predictability and stability, which is -- which are very important to all stakeholders.

I believe that the NRC is the premier nuclear regulatory agency in the world.

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If confirmed, I will make every effort to make sure it remains so. Thank you for the opportunity to appear before you today. If confirmed, I look forward to working with this committee, and to dealing with the challenges that the NRC will face across all areas of its responsibilities.

SEN. BOXER: Thank you very much, sir.

Mr. Magwood.

MR. MAGWOOD: Thank you, Chairman Boxer.

It's a pleasure to be here today to speak with you about my nomination. It's an honor to appear before this panel. I've worked with some of you and some of your staffs over the years on other matters, and I look forward to working with you regarding the Nuclear Regulatory Commission.

Before I begin, I'd like to recognize the service of Edward McGaffigan, whose term I've been nominated to complete. Commissioner McGaffigan was a strong, independent voice on the Nuclear Regulatory Commission for more than 11 years. His commitment, passion, intellect have set a very high standard for all public servants, and if confirmed, I will always view his example as one to emulate.

I would also like to thank Senator Cardin for his introduction. He did such a wonderful job of talking about my background.

I think I'll give you a little bit different perspective about my background. Rather than talk about my academic background and work background. I wanted to let you know I appear before you today as the grandson of men who worked in the coal mines of West Virginia and the steel mills of Pittsburgh.

My father worked for the Postal Service, and for many years, he also held a night job to make sure he provided for our family. My mother was what they now call a stay-at-home mom. She was the lady in the neighborhood other kids came to when they needed help and their own mothers weren't close by. From her, I learned to do the right thing even when the right thing isn't easy. And from my father I learned hard work and personal responsibility.

More than anything else, I say today, you should know that these are the values I offer to the position to which I've been nominated. While my parents have passed away and can't be here today, I'm very pleased that my uncle, Clarence Magwood (ph), is here today with his wife Wulanay (ph), and I thank them for coming across the treacherous roads to join me today.

I'm also joined by my lifelong friend, Kevin Burrell, who is employed with the state government of Pennsylvania. He drove all the way from Harrisburg to be here today, and I appreciate that. By the way, our mothers insist that we first met in baby carriages.

And last and certainly not the least, I'm very pleased that my spouse again is also here. And I thank her for not taking a swing at me when I told her I was thinking about going back into government service. (Laughter.)

After the -- after I stepped down from the Department of Energy in May 2005, I looked back and was very proud of the accomplishments my organization had. We showed innovation, integrity and many accomplishments.

We launched and conducted advanced technology research in many areas; we created an enduring international framework for multilateral research cooperation; we established a new, civilian

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nuclear technology-focused national laboratory in Idaho; and we spurred a quadrupling of the number of students pursuing nuclear technology disciplines in U.S. colleges and universities, including programs at historically black colleges.

But perhaps the most important aspect of my responsibilities at DOE was the management and safety oversight of the expansive nuclear infrastructure that included two large research reactors and thousands of workers. I saw as my personal responsibility to set a very high standard for safety. No matter the cost or impact on programs, I would and did order stand-downs at DOE sites when I was not satisfied with levels of safety.

In one case, safety considerations led me to terminate a long-standing DOE program. And this was, like, very controversial, expensive and disruptive decision, but I felt then and I feel now that nothing is more important than taking clear and responsible action in the face of any question of worker and public safety.

My past experience provides me a deep understanding of the management and operation of nuclear power plants, nuclear fuel facilities, medical and educational facilities, waste treatment and disposal facilities and many other areas for which NRC must provide effective regulation.

Because of my experience, I firmly believe that maintaining uncompromisingly high levels of safety is the first and most important job of any organization that handles nuclear materials. I look forward to bringing these high expectations to work with the Nuclear Regulatory Commission.

Chairman Boxer, I believe that public service is a very great honor and a great responsibility. If confirmed, it will be my purpose to work closely with my colleagues here at the table today and the other commissioners, to fulfill my new mission with a singular focus on the interests of the American people, doing business in a manner that earns the public's trust and always doing the right thing even when the right thing isn't easy.

With that, I thank you and thank you for your attention and look forward to answering your questions.

SEN. BOXER: Thank you so much, Mr. Magwood.

Mr. Ostendorff.

MR. OSTENDORFF: Chairman Boxer, Senator Inhofe, members of the committee, I want to thank you for this opportunity to appear before you today.

I'm honored to have been nominated by President Obama to serve the Nuclear Regulatory Commission. I'm also be -- I'm also privileged to be in the company of my fellow NRC nominees, George Apostolakis and Bill Magwood. I look forward to the opportunity of working with both, if confirmed.

I want to thank Senator Webb for his kind introduction.

I also like to thank my family, especially my wife Chris, for their encouragement and support over the many years.

If confirmed, I look forward to working closely with members of this committee and the respective staffs to carry out the duties as a commissioner. The commission's mission to license and regulate the nation's civilian use of nuclear materials, ensure adequate protection of public health and

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safety, to promote the common defense and security and to protect the environment is critical to our country.

The nation is currently fortunate to have a highly talented and dedicated staff at the Nuclear Regulatory Commission to carry out the strategic goals of ensuring safety and security of commercial nuclear facilities. I'll tell the member of the committee that I'm committed to the NRC's principles of good regulation -- those are independence, openness, efficiency, clarity and reliability.

Furthermore, I appreciate the need for regulatory predictability and stability. I'm humbled by the importance of the task ahead, and if confirmed, commit to work tirelessly to professionally execute the commission's vitally important mission.

I've been privileged to serve our country for many years -- as a career nuclear submarine officer, as a counsel and subcommittee staff director for the House Armed Services Committee and as principal deputy administrator of the National Nuclear Security Administration. While I'll have much to learn, I'm confident that this prior management leadership experience will serve me well if I am confirmed.

I'll add, my experience as senior congressional staff member and as a senior leader of Department of Energy, has given me a deep appreciation of the role of congressional oversight and the importance of your committee.

If confirmed, I commit to communications with you founded on integrity and responsiveness. Again, I appreciate the opportunity to appear here today, and look forward to your questions. Thank you.

SEN. BOXER: Thank you very much.

Dr. Apostolakis, you mentioned your work with the NRC's Advisory Committee on Reactor Safeguards and you appreciated conducting all the committee's meetings in public. Do you believe the NRC would benefit from conducting its meetings, deliberation and votes in public?

MR. APOSTOLAKIS: Senator, I'm aware of the fact that Chairman Jaczko is promoting this idea. I have -- I'm very pleased with the way the ACRS has conduc

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MR. MAGWOOD: No, my point is that I think it's important to do the analysis even if it takes a long time on a textual basis. But then if there's a way of actually arriving at decisions in public I'm all in favor of that. I think that's a good thing to do. I want to make sure that we don't lose the detail Congresswoman --

SEN. BOXER: Okay. Well, let me just make sure that everyone understands my question. I'm not talking about doing the analysis in public. I'm talking about the meetings in public, and your deliberations, and your votes in public once you've gotten the analysis.

MR. MAGWOOD: Yeah, in principle, I don't have a problem with it.

SEN. BOXER: And Mr. Ostendorff?

MR. OSTENDORFF: Senator Boxer, I support the NRC's openness and transparency. I'm aware that there are some discussions currently underway with existing commissioners to look at some changes to the voting procedures specifically. And in principle, I support openness in those activities. But I'd like to have an opportunity, once I am confirmed, to more fully to discuss that and better understand the exact issues.

SEN. BOXER: Okay. Well, I appreciate that all of you are using the word "in principle." But to me, it's either, it's open or it's shut. So I'm going to say to you just from you to me and me to you and does -- and I don't speak for anybody else. I'm going to be watching this because I think that, yes, analysis, and all the hard work has to go on between the folks who you rely on and you should be able to probe that. But once it gets to the meetings and all the information is out there I believe this needs to be shared with the public. And I think it's important not just to agree with it in principle but in practice. So I'll be following that myself.

Now I have a question here for all three of you from Senator Reid and you could just answer it "yes" or "no." If confirmed, would you second-guess the Department of Energy's decision to withdraw the license application for Yucca Mountain from NRC'S review?

MR. MAGWOOD: No.

SEN. BOXER: Okay. Anybody else?

MR. APOSTOLAKIS: No.

MR. OSTENDORFF: No.

SEN. BOXER: Thank you. I think he'll be very pleased with that.

And the last question I have is on reprocessing. I went to France, La Hague. I don't know how many of you have -- you've been to La Hague at all -- one have. And when I went there I was very open to seeing how this new technology could work. When I left there I realized that it is far more controversial than it might appear because -- and I'm sure Mr. Magwood, you saw that. This material is so hot, so hot that even though it's contained in a small container it needs this huge burial site.

And in La Hague, they're going to have to ship back this waste to the countries that sent it in the first place, after 20 years. And so, I guess, my question is to all of you and just try to -- we -- you can do it in writing. I don't want to take a lot of time but do you think there needs to be more work on perfecting this type of a technology? Or do you think it's just ready to roll?

MR. APOSTOLAKIS: Senator, I really don't know much about recycling. So I cannot give you an answer.

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SEN. BOXER: Okay. That's fair.

Mr. Magwood.

MR. MAGWOOD: Well, my -- the work I did at DOE was predicated on the idea that we did need to do a lot more research to develop better technologies that were more efficient and less proliferation prone. And so my personal opinion is that more work needs to be done.

SEN. BOXER: How about you Mr. Ostendorff?

MR. OSTENDORFF: Chairwoman Boxer, I'm not familiar with this particular technology.

SEN. BOXER: Okay.

MR. OSTENDORFF: I want to have a chance to look at it and get back to you.

SEN. BOXER: Okay.

Well, at some point I think it'd be interesting to visit it -- visit that site. It's got more armed guards than, you know, most of our military bases there. And it's very -- it's enlightening, I would say, to go see it.

Let me just say to all of you how much I appreciate your service. And not only this service currently but your prior service in other capacities for the government whether it was in the military, or at DOE, or on the special commission. It's very important.

And I guess, Mr. Magwood, I have a few letters here of people who don't support your nomination. And what they -- the reason they say that is because when you were over at DOE they felt that you were pushing nuclear power.

Well, as I read in the opening statement there's a very big difference between the DOE and the NRC. In one job if you're working to promote a certain type of power whether it's wind -- which -- I don't -- Senator Alexander doesn't prefer -- whether it's solar, whether it's nuclear, whether it's clean coal, whether it's offshore oil drilling whatever it might be, the DOE's job is different from the NRC's.

So I guess, just for my own sensibility, if you could state your sense of the difference between being at DOE and being on the NRC, if you could put it in your own words for me.

MR. MAGWOOD: The role we had at DOE was clearly to remove the barriers that made it very difficult to build new nuclear power plants in United States. And I think we accomplished a lot in that direction.

The role of NRC is to respond to the public need for safety. Now that that door has been opened and others are walking through it. So I think it's an appropriate role for government to remove the barriers, and I think it's an appropriate role for government to make sure that once the barriers are removed that things are done responsibly.

And it's my firm opinion that the best service to the country and to the nuclear industry is to make -- set a very, very high standard for safety and to do so in a way that the public has a great deal of confidence.

SEN. BOXER: Well, Mr. Magwood, I think you were very eloquent on that point. Thank you very much.

Senator Inhofe.

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SEN. INHOFE: Thank you, Madame Chairman.

And Captain Ostendorff, your -- during the introduction you -- is that your son seated behind you?

MR. OSTENDORFF: I have three sons. This is my son Jeff, right here.

SEN. INHOFE: Okay. Which one was at Fort Sill?

MR. OSTENDORFF: My son Chuck.

SEN. INHOFE: Hold your hand up.

MR. OSTENDORFF: He's not there. He's at Fort Sill today.

SEN. INHOFE: Oh, oh, I see. Oh, I see. And when he deployed he probably deployed, my guess is, from Fort Hood with the Lava Thunders. I'm not sure. Would you happen to know that?

MR. OSTENDORFF: He actually deployed with the 2nd Stryker Cavalry Regiment at Vilseck, Germany.

SEN. INHOFE: Okay.

MR. OSTENDORFF: Deployed to Iraq in the summer of 2007.

SEN. INHOFE: Good, good.

You know, I think this is significant and several people have said this is the first time in 30 years that we have new plant applications. And I think now as -- I'm not sure, originally there were 18, now 5 have been suspended. So you're talking about 13 applications.

Have you had time to think through how you're going to handle these in different classes so that you can expedite these? My concern, as I said in my opening statement, of course, we want all safety to be complied with and all that. We want to get these things done.

Have you given any thought, any of the three of you, as to how you're going to handle that many and their different classes? And any kind of prediction as to when you might get one more -- 1 or 2 or 13 of them completed? Anybody?

MR. OSTENDORFF: Senator, I think -- I speak for myself and I ask my colleagues to chime in. I think we've been receiving several briefings by commission staff in preparation for this hearing and in preparation for potential service in the commission about the licensing process, the time schedules, the milestones and some expectations.

And I would say that, I think, it's important for a commissioner to take a hard look at ensuring that progress is being made towards providing rapid but thorough response to the license applications ensuring the applications themselves are completely technically vetted while putting some pressure on the system to move forward appropriately.

So I think there's a balance, kind of, goes to Senator Carper's statement earlier about one foot on the accelerator, one foot on the brake pedal making sure that we're pushing forward to get the system to work but also ensuring that that does not result in any shortcuts that might lessen safety.

SEN. INHOFE: Yeah, we -- okay, that's good.

Any other comments? That pretty much may speak for the three of you.

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MR. APOSTOLAKIS: Well, I have seen what the commission has been doing the last several years in the area of new reactors. I think the process that is in place is good; design certification, early site permits, and finally the combined license. As with anything new, as you said, Senator, for 30 years we have not licensed a new reactor. There will be some glitches here and there that we'll have to fix. But I think that the process in place is good.

And I have seen the staff accelerating other licensing actions like power uprates and license extensions. So I'm confident that they will do their best also to grant -- to accelerate the licensing process for new reactors. But I agree with my colleague --

SEN. INHOFE: Well, and the other I was thinking about is that the three of you constitute a majority at this commission. I mean that's -- that could be good or bad. You don't come in with preconceived notions. That's three out of five are new people, all qualified.

And what I would suggest -- I will be suggesting to Senator Carper that he do something like I did back in -- whatever it was '97, I guess, when I chaired this subcommittee. That is schedule some meetings with some goals; decide about how far along you want to be at different times so that we will be brought into the loop on this. And I'm sure that you would agree that's a good idea, if not, I could get this in writing from them.

So anyway that's -- you might -- will be anticipating that we'll be wanting to know as you move along how long it's going to be to -- how you're coming, how many applications you're looking at and what your progress is.

Thank you, Madame Chairman.

SEN. BOXER: (Off mike) -- I'm going to give you the gavel because I have a meeting next door.

SEN. CARPER: All right. Thank you Madame Chair.

Let me just again welcome you and thank you for your participation. And I know a number of my colleagues have expressed reservations to me over the last year --

MR. : Yeah.

SEN. CARPER: -- that the new administration was not really serious or embracing nuclear power as one aspect of reducing our dependence on fossil fuel, reducing our dependence on foreign oil, cleaning up the air. I think just in -- and I think Senator Alexander has already said this in so many words but just in the last several weeks to have seen/heard what the president said on the floor that -- of the House of Representatives in the State of the Union address of the importance of nuclear energy and embracing it. What we've seen in his budget proposal it puts our money, our country's money where his mouth was that night.

And to again see the strength of these nominees, it's very encouraging for those of us who believe that nuclear power is important component of power generation and energy generation in this country but it needs to be an even more important one. So this is a good, very strong team here.

I'm going to ask if each of our nominees would take a minute or so and just talk with us, in your own words, from your hearts, what do you see as some of the biggest challenges that the NRC is facing this year and in the next several years. What are some of the biggest challenges that that you see the NRC facing this year and in the next several years? How do you help strengthen the NRC as it prepares to take on those challenges?

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MR. APOSTOLAKIS: I believe it has been mentioned several times that the role of a regulator is not always pleasant. I think the challenge is to be perceived as fair by all stakeholders, the industry, and maybe, the public interest groups.

And I think that's a challenge that the commission should continually trying to -- try to achieve to --.

And I believe the number of applications for new reactors will be a challenge. The numbers we hear now are on the high side I believe and if they all come together the agency will need to -- will be challenged to meet its obligations. I believe those two are probably the top in my mind right now.

SEN. CARPER: And the second half of my question is if confirmed, how would your membership on the commission better prepare the commission to meet those challenges?

MR. APOSTOLAKIS: I intend to be actively involved in meeting both of these challenges. I do believe the agency is very open and transparent. We may want to become more transparent by deliberating in public. And I believe making sure that licensing actions taken in a timely fashion is a very important function. So I will also try to contribute to that.

SEN. CARPER: Thank you, sir.

Mr. Magwood?

MR. MAGWOOD: Senator Carper, I think that it's worth noting that the last U.S. nuclear power plant to get started and actually reach completion was started in 1973. As a result, we have a situation in United States where many of the people who had expertise to build this plant are at, or near, or well past retirement age. And the expertise that exists in this country is spread very, very thin between the industry, the vendors, the government and the Nuclear Regulatory Commission.

So I think one of the big challenges we have over the next 5 to 10 years is going to be sharing that talent with the ever expanding requirement and finding a way to transferring the knowledge and experience of the people who are, you know, at, near or beyond retirement age to these younger people who are just coming into the workforce.

One of the things that I did at DOE, I'm very proud of, is I worked hard to expand the academic opportunities for students to get into nuclear engineering. And there's now a significant number of students coming into the workforce. But now we have to train those people and I fully intend to spend a lot of my time working with the NRC staff to try to transfer, to make sure the knowledge of the experienced people gets transferred to the younger people and that we are able to carry out a mission effectively.

SEN. CARPER: Right, thank you.

Captain Ostendorff.

MR. OSTENDORFF: Senator, I would agree with the comments of my colleagues. I would like to focus on just maybe, two challenges and then talk about my background. The challenges, I think, are most critical would be to simultaneously ensuring the safe operation of our existing plants many of which have some aging issues. There are some buried piping concerns, some license extensions to go from 40 to 60 years.

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So our existing fleet has some technical issues that have to be decided upon by the commissioners after receiving proper technical support from the staff, at the same time looking at new plants. And so balancing attention and making sure we have our eye on the ball for both sides of the equation, existing plants and new licenses, will be a big challenge.

As far as my own background what I think I might bring, I've had significant technical experience working with nuclear reactors in the submarine force. I've been around working as a staff member for Congress, I think, in a bipartisan fashion to get to solutions, to get to decision-making, the defense authorization bill process for a number of years. And I've had significant management experience. I'm looking forward to bringing those three experiences in my background to bear.

SEN. CARPER: Okay, thank you. Thank you Captain.

Senator Alexander, I believe you might be next.

SEN. ALEXANDER: Thanks, Senator Carper.

Let me ask each of the three of you a question about used nuclear fuel. And I'm tempted to ask you if you believe nuclear reactors can be operated safely. But I think I'd insult each of you if I did that. I mean, Mr. Ostendorff lived on top of one for a lot of his life. And I assume you wouldn't be taking these positions if you didn't think they could be operated safely. But let me ask you about used nuclear fuel which is a concern that many people have.

Mr. Apostolakis, how many years do you think that used nuclear fuel can be safely stored on site while research determines the best way to perhaps, recycle it or what its ultimate use could be?

MR. APOSTOLAKIS: Senator, the prevailing thinking -- and I don't have any reason to disagree with it, is that it is several decades; some people are talking about even a 100 years.

SEN. ALEXANDER: Mr. Magwood, what's your opinion?

MR. MAGWOOD: In principle, certainly I think you can store spent fuel safely on site for 50 or 100 years. But one thing I highlight is that when we first started storing spent fuel on reactor sites no one was thinking it was going to be there for 100 years. So I think we have to go back and take a look at what we've got in place now and assure ourselves that it is able to stay in place for another 50 years, if necessary.

SEN. ALEXANDER: Mr. Ostendorff.

MR. OSTENDORFF: Senator, the briefings I've had from NRC technical staff have indicated a range of 50 to 100 years.

SEN. ALEXANDER: The -- two of you said that you didn't have an opinion really about recycling the -- and I understand that because -- well, let me -- I do, which is -- and Dr. Chu does, which is that during that time we should accelerate research and development for recycling of used nuclear fuel and find a better way of reducing its mass and its life than now exists, for example, in France. And that we have ample time to do that.

Let me ask this question. One of the decisions the commission -- one of the elements of a decision that the commission makes when it issues a license is whether it has confidence that the federal government is willing to live up to its responsibilities that it will take responsibility for the used nuclear fuel.

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Recently the president's -- we've all commented on the president's call for a new generation of reactors, his appointment of a commission to take whatever steps are appropriate on used fuel, your appointment, the loan guarantees, all those things.

Mr. Magwood, are you comfortable that the federal government will -- do you have confidence the federal government will ultimately accept its responsibility for dealing with used nuclear fuel?

MR. MAGWOOD: The federal government signs contracts with utilities to take spent fuel eventually. It doesn't specify where it's going to take the fuel or how it's going to dispose it. It makes a commitment to take the spent fuel. And I think those commitments are solid enough to proceed. Yes, I do have faith in the government's commitment.

SEN. ALEXANDER: To proceed with an otherwise appropriate license.

MR. MAGWOOD: With some appropriate disposition and we have time, as you pointed out, to decide exactly what that's going to be.

SEN. ALEXANDER: Mr. Apostolakis, what is your thought about that?

MR. APOSTOLAKIS: I thought the issue of confidence was that eventually there will be a solution, a permanent solution. And I do have confidence in that.

SEN. ALEXANDER: Thank you.

Mr. Ostendorff.

MR. OSTENDORFF: I concur with my colleagues, Senator.

SEN. ALEXANDER: Thank you very much.

Now let me ask you just an overall question. All of you have broad experience with the nuclear industry. Why is it that the United States which has invented nuclear power plants and gets 70 percent of its carbon-free electricity from them, at a time when we want lots of low cost electricity and are concerned about climate change?

How is it that -- why is it that China is starting a plant every three months and the UAE, and India, and Great Britain and everybody else in the world seems to do it. And we haven't done -- we haven't started a new plant in 30 years and what could you do as a commissioner of the NRC appropriately to create an environment in which the United States could catch up with its own invention?

Mr. Apostolakis.

MR. APOSTOLAKIS: I think a combination of factors contributed to this slowing down of the industry in the United States. First of all, we do have, at least in the last 30 years, alternative sources of energy. So the pressure of using nuclear power was not that great.

I think Three Mile Island and Chernobyl did not help. Three Mile Island, not only because of these consequences which were really next to nothing but there was a tremendous regulatory activity that followed Three Mile Island that created regulatory instability and imposed tremendous costs on the industry. This was a natural reaction I think. I mean, I don't think there are any bad guys here.

And the other thing is, of course, that maybe our processes here are a bit more open than in other places where they can make decisions much faster.

SEN. ALEXANDER: Mr. Magwood.

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MR. MAGWOOD: I think that the biggest reason was because we simply didn't need to build much of anything in the last 30 years is we weren't just not building nuclear plants we weren't building coal plants, we weren't building lots of things for many years. And that's because we had a large oversupply of electric capacity left over from the 1970s that really has just gone away in the last several years.

I think that what we can do as NRC commissioners, if we are confirmed, is to do our job well. To build the public confidence that the government is doing its job to oversee safety, to provide a framework by which the industry can implement new nuclear power plants. That's what we can do. If we do what we're supposed to do that's the best thing for the construction of new plants in this country.

SEN. ALEXANDER: Mr. Ostendorff.

MR. OSTENDORFF: Senator, I'd just say that the predictability and stability of the regulatory process is critical. As part of our jobs, if we are confirmed, in order for industry to be able to make some sound business decisions, strategic planning decisions, so to speak. We need to have an understanding of what the framework is not just next month or next year, 10 years, 20 years down the pike. And to the extent that we can advance the stability and predictability of issues as commissioners, I think that's -- it would be a significant achievement.

SEN. ALEXANDER: Thank you, Mr. Chairman.

SEN. CARPER: You're welcome. Thanks for your leadership on these issues.

Senator Cardin, thanks for yours as well.

SEN. CARDIN: Mr. Chairman, thank you very much.

Again, let me thank our three nominees. I was impressed by your backgrounds and your careers before you appeared here today. It's only been reinforced by responses to the questions. So once again thank you.

I'm going to follow up on Senator Alexander and I think Senator Inhofe's point and Mr. Ostendorff, your last point about predictability.

I had a chance to question Dr. Chu when before the committee at to whether it's reasonable for us to expect that we can expedite the process for new nuclear power plants that to have to wait 10 years to try to get a plan on the "done" is unrealistic. Investors aren't going to invest in that and you need predictability as Mr. Ostendorff said. You need a process that does not compromise public safety. We understand that.

We want to make sure that all of the procedures are followed. But you need to have a process in place to, at least, to a conclusion and it's been so long. There's not a confidence that that is in place in our country. We developed the technologies to have safe nuclear power and we obviously can get it done. But it requires a Nuclear Regulatory Commission that is committed for the process to work.

And I questioned Dr. Chu as to how -- what is a reasonable length of time. He said he would like to answer that question but the NRC is an independent commission. So he doesn't have that type of authority. But you all will have that type of authority once you're confirmed. And I just urge you to use that carefully so that we can move forward with nuclear capacity in this country and do it in a safe way.

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And as Mr. Magwood -- the other point that you mentioned that I think is important. And I think the commission can play a role here is we have to develop the underpinnings of a nuclear industry in this country that we, sort of, lost over the last 30 years; whether it's in the development of technology on our college campuses or whether it's the manufacturing capacity to be able to manufacture here in America the component parts for a nuclear facility or whether it's how we deal with waste.

You're correct. The thought was there was going to be a relatively temporary storage. Well, now we're looking at it being a little bit longer term. So we need to make sure that we have the technologies and productions in place to be able to deal with waste.

And then lastly, the point that has been raised to Mr. Magwood, you've had the most experience of any of the three is on the reprocessing issue. There's a lot of concern the reprocessing could lead to proliferation. And we need to be able to have confidence if we're going to be doing reprocessing that it can be done in a way consistent with what President Obama has said.

And I think all of us agree that we want to prevent the proliferation of nuclear weapons in the -- in this world. So -- and I really do think that you all are entering this public service at a critical point in our nation's history as to whether we'll get it right, whether we can put in place in a realistic time period so investors and utilities can plan and invest and our nation can have an energy policy that not only makes us self-sufficient from the point of view of producing electricity, but also does it in an environmentally friendly way keeping jobs here in America.

So I just would urge you as you move forward in this that your job is more than just looking at an application that comes down the road, but to develop a predictable system for -- the investors feel confident and to develop a nuclear industry in America that will keep jobs here, keep technology here and make sure we're doing it in a safe way. Obviously first and foremost is public safety. We'll do it in a way that we can have a nuclear industry in America. You all nodded as I was speaking. (Laughter.)

I just want the record to reflect I got a lot of nods. I do have another 47 seconds if anyone wants to just -- Mr. Magwood, since you're from Maryland, tell me what I want to hear here. (Laughter.)

MR. MAGWOOD: I think that there is a need, as you pointed out, for investors to have some confidence about how long it will take to deploy these plans, but I think that everyone should understand that we haven't done this in a long time. And it's not just the government side that needs to figure out how to get this right; it's also the industry side.

And the two sides working together are going to take a little bit longer in this first go-around than maybe everyone would like, but I think that we will learn a lot from doing it. And so the next time that we get to applications perhaps at some point in the future, I think it will be a lot more efficient process, a lot more predictable.

SEN. CARDIN: I think that's the right answer.

I think the industry expects that we have the -- we're sort of doing this almost for the first time again, but I hope that the path that we follow will provide the predictability that Mr. Ostendorff mentioned, the confidence in the public on safety that the public will demand, so that we can in fact have nuclear power as part of our energy for the future of this nation. Thank you.

Thank you, Mr. Chairman.

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SEN. CARPER: Senator Boxer, I want to report that we're down to Senator Klobuchar here. And the gavel is yours, thanks.

SEN. KLOBUCHAR: Thank you very much. My first question actually is about a bill that a number of us are -- bipartisan group of senators are supporting offered by Senator Mark Udall to increase support for R&D of small modular nuclear reactors. They could be manufactured on assembly line and therefore could be much cheaper than large-scale reactors that we're used to.

Any thoughts on the prospects of these type of nuclear reactors becoming more mainstream? Anyone can take it.

MR. MAGWOOD: I'll take it. Senator, I understand that the small modular reactors are being looked at by industry. There are several different designs being considered. I also understand that the existing commission has already taken a look to ensure that its licensing procedures are set up and ready to receive any licenses that they may receive for a small reactor.

And I think it's something we'll be watching very closely the next few years as industry comes forward with some ideas and hopefully there will be some R&D efforts that will help advance those initiatives.

SEN. KLOBUCHAR: Okay, thank you. One of the things that has happened because of the lack of new nuclear plant construction over the past decades is that there's also lack of domestic nuclear engineers, and that was one of the reason that I cosponsored the America COMPETES Act of 2007 which supports nuclear science programs. Anyone want to comment on what the status is of our domestic nuclear workforce and what can we do to improve our workforce expertise in this area?

Mr. Apostolakis? You know, did I get it right?

MR. APOSTOLAKIS: Well, I can tell you what --

SEN. KLOBUCHAR: Apostolakis.

MR. APOSTOLAKIS: Right.

SEN. KLOBUCHAR: I have a hard last name, so I work to try to pronounce other hard last names of people.

MR. APOSTOLAKIS: (Laughs.) Thank you. Thank you. Well, what we have seen at MIT the last five, six years is that the number of domestic applicants to the department has increased and the quality also of the applicants has increased. And from what I hear, the same thing is happening at other universities around the country. Now, is the number adequate, I don't know, but it takes some time to reach that level.

SEN. KLOBUCHAR: Okay.

Mr. Magwood.

MR. MAGWOOD: Yes, as I mentioned earlier one of the things that we are very proud of at the DOE was helping to sort of spur the rejuvenation of some of the nuclear engineering programs. When I came into the Office of Nuclear Energy in 1998, there were about 480 -- and I remember this number because it's so startling -- 480 students in the entire country taking nuclear engineering, and today I understand it's about 2,200. So there's a huge upsurge, and I think that we're actually in pretty good shape when it comes to that aspect of it.

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But the question I think is how do you get these people trained in practical ways to really carry out the various missions in --

SEN. KLOBUCHAR: When there's been not actual construction going on to the extent, right?

MR. MAGWOOD: Right.

SEN. KLOBUCHAR: Like many nuclear power plants, we have two in Minnesota actually, but one of them, Prairie Island Nuclear Power Plant is the closest plant to an Indian reservation in the country and it has had to store -- its literally right next to it, adjacent -- and it's had to store its radioactive waste on site in dry casks above the ground potentially creating environmental and security risk. What do you see as the short and long-term solutions to the problems of nuclear waste storage? Anyone want to take that one?

MR. OSTENDORFF: Senator, I think just recently, and Senator Alexander mentioned this in his remarks, the administration has set up a Blue Ribbon Commission. It was announced I believe the week before last as far as its membership that will be looking at alternatives for high-level waste storage on a permanent basis. And so it looks like there will be an effort to look at alternatives to prior plans.

I think we're optimistic that there are technical solutions here. I don't think anyone of us believes that this is a technical problem for which there is no solution, but I think we're optimistic that this commission will highlight potential options in a very constructive way and hopefully in a short time period.

SEN. KLOBUCHAR: Okay. One last question; as part of NRC's efforts to streamline our nuclear power plant construction, one change has been to certify standard plant designs which will be effective for 15 years and will be acceptable independent of the specific site. Is there any concern that certain designs would not be effective in various regions?

To me this sounds like a smart idea of how to expedite things, but just any comments that you have about this, because as you know the majority of new designs approved by the NRC have never been built or operated.

Mr. Magwood?

MR. MAGWOOD: Well, I think what I would say is that even though there's a truly, I think important effort to standardize the designs, there's still lots of designs. So utilities have a pretty wide choice of different designs to choose from. And I know that some have chosen plants because of the size and the impact on the thermal output that they will have on local lakes.

There's different characteristics of all the plants, and I think there's enough different -- there's enough variety out there for the utilities to choose technologies that best suit their circumstances.

SEN. KLOBUCHAR: Okay, thank you very much all of you.

SEN. BOXER: Senator Merkley.

SEN. JEFF MERKLEY (D-OR): Thank you very much, Madame Chair. And I -- if this question has been asked, then please let me know, and I'll simply refer to the record and gain that information. But I'm -- we have in Oregon a plant that was retired a few years ago, but it still has a tremendous amount of fuel rods stored on site in dry casks. And as my colleague from Minnesota was noting, these storage locations are across the country.

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What kind of security risk do they pose, and to what degree does it (make ?) Nuclear Regulatory Commission a body that can help address that challenge?

MR. APOSTOLAKIS: Well, Senator, I know that the safety and security of these pools has been a matter of intense attention, both by the commission and various stakeholders. I've seen various studies that show that the pools are safe, other studies that dispute those.

I don't know the details of all these to tell you to what degree these things are safe, but as long as the commission allows them to be there, the presumption is that they are safe.

SEN. MERKLEY: Well, I'll -- may just comment that it shouldn't be an issue of presumption, it should be an issue of intense analysis and changing the policy if these comprise a risk to our nation to have these dry casks spread around the country with very diverse security measures protecting them --

MR. APOSTOLAKIS: Right.

SEN. MERKLEY: And the possibility of explosions -- conventional explosions spreading nuclear materials throughout our nation. And so I'm very disturbed by a notion that we should just presume that they're safe.

MR. APOSTOLAKIS: No, no, no, no. What -- that's not what I meant. All these analyses are being done, and I'm sure they will continue to be done. My only point was that as an outsider I would say that if they are allowed to be there the commission has approved them. So as a citizen, I have to presume they're safe.

Now, as a commissioner, if confirmed, I may not take that attitude. I may look more carefully at the various studies, maybe ask for more studies until I convince myself that they are indeed safe enough and secure enough.

SEN. MERKLEY: Thank you.

Mr. Magwood, you've been a proponent of nuclear power. Do these storage sites pose a significant risk, and what can the commission do to address the challenge?

MR. MAGWOOD: The challenge of the spent fuel source?

SEN. MERKLEY: Yes.

MR. MAGWOOD: I think that this -- I think I mentioned a few minutes ago -- I think that one of the first things that I would like to do if I'm confirmed is to understand exactly what the state of spent fuel storage is along these various sites, because with the administration's move towards a new decision making process regarding the disposition of spent fuel, it's quite possible that some of these spent fuel storage facilities may have to be around for decades. And as I mentioned a few minutes ago, we did -- the United States wasn't thinking that spent fuel would stay on utility sites for 50 or 100 years.

Now that may be the case, we have to go back and look and make sure that everything that is in place today is satisfactory for long-term storage and if it's not, to take corrective actions as soon as possible.

SEN. MERKLEY: Let me turn to another question. A few years ago, in 2002, a hole was discovered in a reactor head at the Davis-Besse plant in Ohio. It surprised a lot of folks that that was

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able to happen. Does it -- does that provide any insights on the type of oversight that's needed in terms of reactor operations?

MR. OSTENDORFF: Senator, my understanding is you're referring to the reactor vessel head corrosion problem from the leaks --

SEN. MERKLEY: Yes.

MR. OSTENDORFF: And I'd say that that was a -- it's my understanding and I've not been involved in a commercial nuclear industry, but that was a big wakeup call, that it indicated that there'd been a sense of complacency with respect to investigating and taking care of action to stop leaks at the source. And that that's a very serious material issue, but it also has broader safety implications.

You know, I think there's been a lot of lessons learned and actions taken subsequent to the Davis-Besse incident that -- have been positive. At the same time, the nature of these operations for existing plants are such that you can never take your eye off the ball. You have to continue every day to enforce that safety culture of high expectations for technical competence and accountability.

SEN. MERKLEY: Thank you all very much.

SEN. BOXER: Thank you, Senator.

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SEN. CARPER: Mr. Magwood?

MR. MAGWOOD: I think that one of the major lessons learned not just from Three Mile Island, but through a lot of the problems that operations utilities had during the 1970s and early '80s was that -- the lesson learned was that management counts, that excellence in management at utility sites makes up for any -- or I should say makes it possible to operate nuclear power plants, whereas if you simply rely on technology you'll find that mistakes will always be made. So the importance -- I think the most important thing we learned over the last several decades is good management, good people, well-trained people.

And it always comes back to people. And I guess I'd rather have an excellent staff of great managers operating a so-so technology as opposed to a great technology operated by people who didn't know what they were doing. So that's I think one of the big lessons we learned.

SEN. CARPER: Okay, thank you.

Captain Ostendorff?

MR. OSTENDORFF: Senator, one specific component I have mentioned is that of operator training. I think one of the lessons learned out of Three Mile Island was the operators at the plant did not really understand what was the root cause of the phenomena they were observing, what were the indications, what caused those physical conditions, and as a result -- I mean, at least I saw the Naval Nuclear Propulsion Program.

In the five-year period after that accident, I saw an increased emphasis on operator understanding of the physical principles of heat transfer, fluid flow, reactor kinetics, to ensure that everybody really understood what was the theoretical basis and engineering basis behind the procedures.

SEN. CARPER: All right, thanks. Let's talk a little bit about tritium. From time to time we have reports of leakage and tritium being found in the water that surrounds all of our nuclear power plants.

Most recently, you've heard some reports out of Vermont Yankee that have raised some concerns there. Could you all take a moment -- I don't care who answers this -- but take a moment, talk to us about tritium, describe it, what kind of threat does it pose to us as human beings? If it's in our groundwater, should it be in our groundwater?

I think scientists say that they're -- trace elements are already in groundwater in a number of places. Just talk to us about the kind of threats it poses to human health in low quantities or higher quantities, and what should the (NRC ?) be thinking in doing with respect to these leakages?

MR. APOSTOLAKIS: I think the NRC should make sure that the buried pipes from which the tritium is leaking remain intact. There should be programs of some sort, or something in the regulations that will make sure that these pipes do not leak. I don't think that any leaks are acceptable.

SEN. CARPER: All right.

Mr. Magwood, Captain Ostendorff?

MR. MAGWOOD: One example I draw from my past experience when I think about this issue is a case from New York. We had a reactor at New York, at the Department of Energy called the Brookhaven National Laboratory that developed a tritium leak. And all the analysis from all the

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scientists said this tritium leak posed no threat to human health, no threat to anything offsite, but what I learned from that experience was that that wasn't really the point.

The point was that the public lost confidence in the ability of the Department of Energy to operate the facility safely, and this resulted -- the facility was shutdown. A very, very valuable piece of research equipment was lost to the country, and when I think about these other cases we hear about around the country, I think that people need to understand that the public views these kinds of problems as an indication of the deeper imaginary problem at the plants.

And so one of the things I will certainly do if I am confirmed is to make that point very clearly to people operating nuclear power plants that, you know, it isn't the point that it's not hurting anyone, the point is it's showing that you don't have your act together, and that's the most important thing.

SEN. CARPER: Okay, thank you.

Captain?

MR. OSTENDORFF: Senator, I'd agree with my colleague's comments and just add that the radiation hazard here is not external radiation to the body, it is an issue for -- from health perspective if tritium is ingested, so it's a real concern if it's present in the drinking water. But if tritium were just in this glass on my desk, and I never drink that, it would not be a radiation health hazard to me.

That said, I completely agree with Bill Magwood in -- about his comments on the public confidence and the public education aspects of ensuring that this is dealt with in a serious, concerted manner to resolve the issue.

SEN. CARPER: Okay. Thank you all.

SEN. BOXER: Okay. Any other senators?

Well, I have just one -- a couple of questions I have to ask you, for all nominees, and I'll ask you each to say yes or no.

Do you agree if confirmed by this Senate to appear before this committee or designated members of this committee and other appropriate committees of the Congress and provide information subject to appropriate and necessary security protection with respect to your responsibilities?

MR. APOSTOLAKIS: Yes, I do.

MR. MAGWOOD: Yes.

MR. OSTENDORFF: Yes.

SEN. BOXER: Do you agree to ensure that testimony, briefings, documents and electronic and other forms of communication are provided to this committee and its staff and other appropriate committees in a timely fashion?

MR. APOSTOLAKIS: I do.

MR. MAGWOOD: Yes.

MR. OSTENDORFF: Yes.

SEN. BOXER: Do you know of any matters which you may or may not have disclosed that might place you in any conflict of interest if you are confirmed?

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MR. APOSTOLAKIS: I do not.

SEN. BOXER: Okay.

MR. MAGWOOD: No.

MR. OSTENDORFF: No.

SEN. BOXER: Okay, and I understand Senator has one more question -- Senator Merkley?

SEN. MERKLEY: (Off mike.) Thank you very much Madame chair, yes. I wanted to ask about the expiration of different designs that might inherently increase the safety of nuclear power and therefore also might reduce its costs. There is a group of engineers in Oregon working under the title NuScale Power, and it's a complete redesign of a nuclear reactor. It creates a -- essentially a silo in the ground. The -- the reactor core is hung in a manner that reduces its vulnerability to earthquakes.

It has -- it's all gravity-fed water systems, there's no pump failure. It has the ability to remove the copper tubing design, if you will, a major issue that shut down Trojan and replaced it as a complete tubing replacement, almost like an element that's pulled out and inserted. And because it's below ground it may provide greater ability to provide protection from terrorist threats.

Such designs -- I'm sure there's other groups around the country who've been looking at significantly different approaches, but to what degree does the Nuclear Regulatory Commission in your -- each of your visions, should they be promoting or exploring designs that may differ substantially from commercial reactors today, but might hold promise for far greater security in the future?

Mr. Magwood?

MR. MAGWOOD: I think this type of work is very important. As a matter of fact NuScale began as a -- part of a research program that I started back when I was at DOE. It's a type of research that really can set the stage for the longer-term future. Today there's a lot of work to do, but 10 years from now, 20 years from now, who knows, that may become the standard for nuclear power in the future. And I think we have to encourage this, and I look forward to seeing, you know, these types of activities moving to the commercial sphere.

MR. APOSTOLAKIS: Yes, I believe the commission and its staff should be informed at all times on the activities that you mentioned in Oregon and other places, and be prepared -- make sure that the commission and the staff are prepared to do a good review of an application if -- when it comes to the commission for a design certification, or for maybe a combined license application. So as a commissioner, if confirmed I will make sure that this happens.

MR. OSTENDORFF: Senator, I'm not familiar with the NuScale design but I'll look into that if I am confirmed. I certainly think it's commission's job writ large to ensure that they're up to speed on the current thinking of industry and design engineers as to what might be in the realm of the possible and to be actively engaged in understanding technically what is being worked on, so they're prepared to deal with the licensing application.

SEN. MERKLEY: Thank you. Madame Chair, do we have time for one more question?

SEN. BOXER: Yes.

SEN. MERKLEY: Mr. Magwood, I thought it'd be useful to follow up on the chair's statement on conflict of interest. Just for the record, has your consulting work with Secure Energy North

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America Corporation or Advanced Energy Strategies, any of those companies that you've worked for, are they in any -- is there any possible projects underway that would come before the NRC that would pose any form of conflict of interest?

MR. MAGWOOD: No.

SEN. MERKLEY: Thank you.

SEN. BOXER: Gentlemen, you have been very forthcoming. We are very appreciative. You have until next Tuesday, February 16th, to submit the answers to our written questions. There may not be any -- I have -- I may have one or two. And then as soon as we get those back, it is my intention to work with colleagues to move your appointments very quickly. And again we really want to thank you. I'm sorry --

STAFF (MS.): Members have -- (off mike.)

SEN. BOXER: I'm sorry, we have till the 16th, you have till the 23rd. Thank you for the correction, Laura. And I want to just revisit a couple of things with colleagues here. Just as a reminder, we do have a hearing this afternoon on two appointees. One is the inspector general of the EPA, and the other is Appalachian Regional Commission and the Northern Border Regional Commission.

And if Senator Alexander ascertains that the TVA nominees are in town, he has now asked if we could do the hearing at 4:00. So standby for that.

I also wanted to inform colleagues and this is very good news for us that AASHTO which is the group that represents the State Highway and Transportation folks that we work with so closely at home, they've released a new report today, Senators. They are basically saying that the stimulus bill was very successful, that it created hundreds of thousands of jobs. They have it actually summarized here, and all the various projects.

They say that they're asking for another jobs bill, and they're making the point that the infrastructure, although it was only about 6 percent of our bill, created about 25 percent of the jobs. That's what they're saying.

So it's a very good report, and I won't put it in this record, because it's a different subject, but anybody wants to see this report, it's called "Projects and Paychecks, a One-year Report on State Transportation Successes Under The American Recovery and Reinvestment Act."

And I feel since there's been so much controversy about whether we've -- I don't understand how people could say you don't create jobs when you rebuild your infrastructure. It's counterintuitive and it turns out it's absolutely wrong to say that.

They're looking at over 10,000 projects that were completed. They're looking at who the people are that got the jobs. So I have this study here if you want to get your hands on it.

And let's see, I think that concludes everything. Remember, we're not going to have our hearings that we originally were going to have on Thursday and Wednesday. So we're going to do everything today and put off the others till we get back.

And anybody else have any questions, comments? If not, thank you so much, we stand adjourned. And to our friends at the table, thank you very much. (Sounds gavel.)

HEARING OF THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE; SUBJECT:
NOMINATIONS; CHAIRED BY: SENATOR BARBARA BOXER (D-CA); WITNESSES: GEORGE
APOSTOLAKIS, NOMINEE TO BE A MEMBER OF THE NUCLEAR REGUL

LOAD-DATE: February 11, 2010