

ISSUES IN FEDERAL GOVERNMENT FINANCIAL LIABILITIES: COMMERCIAL NUCLEAR WASTE

HEARING BEFORE THE COMMITTEE ON THE BUDGET HOUSE OF REPRESENTATIVES ONE HUNDRED TENTH CONGRESS FIRST SESSION

HEARING HELD IN WASHINGTON, DC, OCTOBER 4, 2007

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**ISSUES IN FEDERAL GOVERNMENT
FINANCIAL LIABILITIES:
COMMERCIAL NUCLEAR WASTE**

THURSDAY, OCTOBER 4, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, DC.

The committee met, pursuant to call, at 10:00 a.m. in room 210, Cannon House Office Building, Hon. John Spratt [chairman of the committee] presiding.

Present: Representatives Spratt, Doggett, Berry, McGovern, Etheridge, Moore, Ryan, Simpson, Porter, Alexander, and Smith.

Chairman SPRATT. Good morning and welcome to the House Budget Committee's hearing on Federal Government Liabilities and in particular this morning on commercial nuclear waste.

We have an excellent panel of government witnesses before us who have thought long and hard about this question and I want to thank them for their participation; their willing and enthusiastic participation in this hearing today.

Given the fiscal challenges that we face in the years ahead, it is important to gain insight into the nature of the Federal Government's unfunded liability. As policy makers we express concern most audibly and consistently about liabilities that relate to the aging of the U.S. population and the impact on our Federal retirement government programs like social security and medicare. But there are additional liabilities, small in magnitude but deserving of scrutiny and understanding.

Our goal for this hearing is to gain the insight we seek into the government's financial liabilities rising from DOE's missed 1998 deadline by which it was to begin disposing of spent nuclear fuel as specified in the Nuclear Waste Policy Act of 1982.

As a result of this failure, there are now scores of active cases pending in the Federal Court of Claims and various appeals courts from which from affected civilian nuclear waste power plants all receiving recovery from DOE for breach of the 1998 contract. Present estimates range from \$7 billion to \$30 billion.

Ultimately, while we may call spent nuclear fuel a liability issue, it is a taxpayer liability issue. As such, the Committee would like to better understand how future cash flows, budgets, and baselines are all affected under different scenarios, with particular emphasis on how we can minimize the cost to the taxpayer.

In the final analysis, everyone in this room has the same goal of minimizing taxpayer liability associated with spent nuclear fuel while persevering equity across all stakeholders.

We very much appreciate you coming today, but before turning to you for your testimony, let me turn to our Ranking Member, Mr. Ryan for any statement he cares to make to open this up.

Mr. RYAN. Thank you, Chairman Spratt. I appreciate this opportunity to get a better understanding of our federal liability stemming from the nuclear utilities breach of contract lawsuits. I look forward to receiving this testimony before. I would like to yield the balance of my time to the gentleman from Nevada, Mr. Porter, who has a particularly strong home State interest in this matter.

Mr. Porter.

Mr. PORTER. Thank you very much, and Chairman, I appreciate this opportunity. And as mentioned, we are here today to examine the Federal Government's financial liability for DOE's nuclear utility lawsuits. And as mentioned in the opening statements, we certainly appreciate the panelists that are here and to the Director, thank you for being very responsive. Not that we always agree, but I certainly appreciate your responsiveness to the rest of the panel.

And as was mentioned, the aim of the hearing is to look at the budget impact of 56 pending civil lawsuits regarding the breach of the 1998 contracts. To date we have paid about \$300 million so far to 90 something, give or take. I am assuming that probably does not include our costs in litigation, with potentially paying out another \$7 billion by the year 2017. You know we talk a lot about dollars and cents and sometimes I question that we make sense, but we are looking at a project today with a total life cost of close to \$56 billion once it is constructed.

What I would like to do is just take a moment, with the Chairman's support, and go back to 1982 when this started. And I do not know how many people in this room were alive in 1982, maybe a couple of us. But 1982, that is the year that Sony launched the first compact disc player. In 1982, when this project started, the Dow Jones average was about 1,000 points. It is now over or close to 13,000. Ronald Regan was President in 1982. Where was the cell phone? Where was the internet? Al Gore was a member of this House in 1982.

Here we are 25 years later in 2007 and we are basically where we started in 1982. You know Brezhnev was in office half of that year of 1982. Korbach and pardon me, Anderpoff that shared that year. Korbach was not even in office yet when we started this project in 1982. We started the ground breaking for the Vietnam Memorial.

And I give this as an example of in 25 years we have studied a whole in the ground to death. Management has changed, Congress has changed, I am not sure how many members of this body of this U.S. Congress were in office then and how many changes there have been. But if you look at the Department of Energy and how it has evolved, there has been a change in leadership, change in management, multiple presidents, and we are where we started 25 years ago.

And I know that we think that this is just in Nevada not in my backyard argument, but I know what we are here today to talk

about costs. But we are looking at a hole to nowhere and I encourage every member of this Congress to visit this hole to nowhere that is a hole in the ground that we have spent \$10 or \$11 billion on so far and we have not moved one inch on the playing field.

Now, I understand that each State has its challenges of what to do with nuclear waste. I understand that. And I understand the bulk of this body, both democrats and republicans are looking for a place to put nuclear waste. And I support nuclear energy. But I don't know how much longer this body can look at this liability, not only from a science perspective of a science that is untested. We are going to have close to 50 years in this project before it opens. How many projects will this body—talk about unfunded liability. How many projects will this body say that we are going to take 50 years to build? I just think that is unacceptable to the American people.

It is a hole in the ground. Literally it is a tunnel where we have spent billions of dollars. And I don't know how, with a straight face, this Congress can say, "Keep digging." I don't know how this Congress can say, "We should throw more money at this project." Again, almost 50 years is going to pass before this project is up and running. If it started today, if it was available for storage today, it would be full.

Mr. Chairman, I appreciate this opportunity and I am sure that again there are other members of this body, this Congress that want to find a place that is out of sight, out of mind so they don't have to think about it. And I am concerned for the safety of Nevadans and I am concerned about the science. And I have spent a lot of time investigating the project. I had one of the largest investigations of this project in the history of Congress. But this Congress has not met its obligation to the American people by throwing money at a project that is not going to succeed. It has proven to be unsafe. It is being built on an earthquake fault line. We have redone the science over and over again. There is proof that we are already a huge liability.

So, Mr. Chairman, I understand that members may have a different perspective than I do. But I think as we look at a project that is going to cost \$50 or \$60 billion that we have been studying now for almost 30 years and still have another 20 years to go. We have to say, "Lets stop and take a time out and look at where we are going and find a new approach to storage nuclear waste."

So, Mr. Chairman, thank you and I appreciate the panelist.

Chairman SPRATT. Thank you, Mr. Porter. We are going to put you down as leaning no? [Laughter.]

Let's now turn to Edward F. Sproat who is the Director of the Office of Civilian Radioactive Waste Management. And as with all of the witnesses, if you would simply submit your statements for the record without objection they will be made part of the record and you can summarize them as you see fit.

But Mr. Sproat, the floor is yours and then we will turn to the other witnesses. Thank you for coming.

STATEMENT OF THE HONORABLE EDWARD F. SPROAT, III, DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Mr. SPROAT. Good morning, Mr. Chairman and Mr. Ryan and fellow members of the Committee. Thank you very much for this invitation to address the Committee this morning about this very important issue. I do request that my formal testimony be submitted for the record.

What I would like to do is first of all let you know a little bit about myself. It has been 16 months since I was confirmed by the Senate for this position. I am bringing with me 29 years of senior management experience in the nuclear industry with me. I have been in charge of nuclear plant design, licensing, construction and operations. I ran an international joint venture in South Africa to help them develop an advanced nuclear reactor down there. And I am also a registered professional engineer.

So the issues we are going to talk about this morning are of a technical nature and a project management nature. I have a lot of experience and I am bringing that to this job.

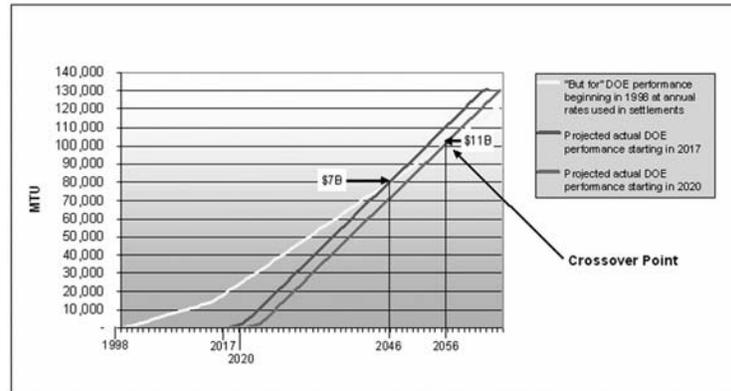
My first hearing after I got confirmed was in July of 2006 in front of the House Subcommittee on Energy and Air Quality. I committed to that House Committee in July of 2006 that we would submit our license application to the Nuclear Regulatory Commission no later than Monday, June 30, 2008. I am here to tell this Committee today we will meet or beat that date.

That is critical because getting the license application in and getting the license application review by the Nuclear Regulatory Commission done is on the critical path to moving the Yucca Mountain Program forward.

Now, DOE is almost 20 years late in meeting its obligation to pick up spent nuclear fuel. And as of right now and what I told the Committee back in July of last year was that our best achievable date, if everything was to go right, our best achievable date to be able to pick up start performing on the standard contracts is March of 2017. Now there are some provisos about that best achievable date. One of the key issues is that the schedule assumes unconstrained cash flow so that we are able to maintain critical path activities on this project on our best achievable schedule.

As a result of DOE's partial breach of our standard contracts, in other words because we didn't start picking up fuel in 1998 as required, if we open the repository on our best achievable date of 2017 we are estimating that the total taxpayer liability to the commercial nuclear plant contract holders will total about \$7 billion. Can I bring up the first slide, please.

Government Liability Continues Until Actual Performance Meets Contractual Obligations



Mr. SPROAT. On this chart let me just point out three lines. The yellow line shows what we, Department of Energy, projected our acceptance rate and pick up rate of spent nuclear fuel would be if we started picking up in 1998. And this yellow curve is the line we use in our settlement discussions with the contract holders.

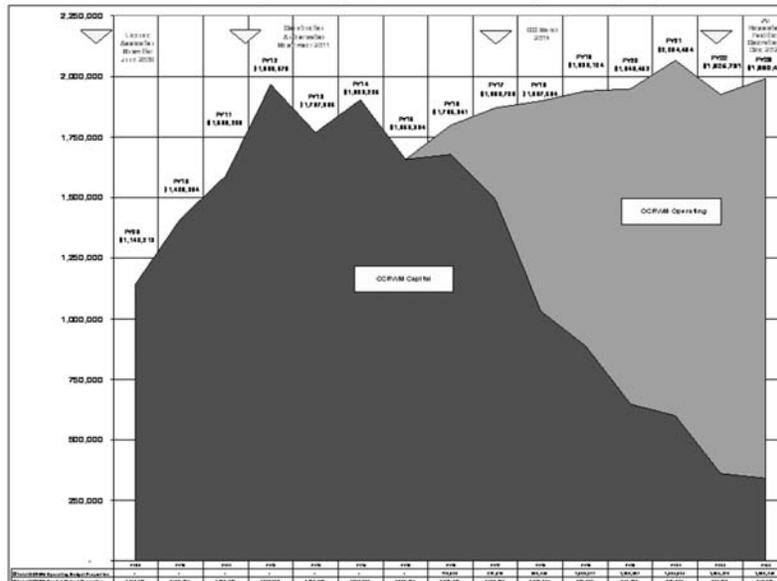
The green line is our projection of what we will be able to pick up if we open the repository in 2017. The red line is our projection of what we would be able to pick up by if we open the repository three years later in 2020.

Where those red and green lines cross the yellow line is where we project we will have caught up with our contractual obligation to the utilities. And what that graph shows you is that if we open the repository at our best achievable date, in 2017, we will catch up in the year 2046 and our projected total taxpayer liability is \$7 billion. With just a three year delay, we won't catch up until the year 2056 and the total liability will have grown an additional \$4 billion to about \$11 billion.

That tells you there is a real cost to the U.S. taxpayer in terms of projected liability year by year this program is delayed. And I want to remind the Committee that the 2017 date or quite frankly any other date after that is very dependent on us having a cash flow required to meet our schedule and maintain the shortest possible critical path activities on this program. And I will talk about those in a minute.

If I can go to the next chart.

OCRWM Total Budget Projection to Full Repository Operations



Mr. SPROAT. The next chart is the total budgetary authority requirements that we have projected will be needed to build and operate the repository through the year 2023. In other words, these budget authority cash flows we will need to meet that 2017 date. These numbers were developed over the past six months. I presented them to the House Appropriations Subcommittee on Energy back in April.

These numbers were developed by an interdisciplinary team of both DOE and outside experts. They were independently reviewed by a company that has nuclear construction experience. They include sufficient contingency and management reserve to give us an 80 percent confidence factor that the actual cost of building and operating this repository will come in at or below these numbers.

So these are the best numbers we have and are, I believe, very credible numbers in terms of what it is going to take to build and operate the repository.

What you will notice is the annual budgetary authority requirements on this cash flow starting in fiscal year 2009 are between one and a half to two billion dollars a year. Now that is to meet the 2017 date. I will compare that to our existing and historical budget authority on this project which is running between \$350 and \$500 million a year. And when you take a look at the budget targets in the out years, in 2009 and beyond, they are continuing in that historical range of between \$350 to \$450 million a year.

That is a substantial, a huge gap between what is currently being planned for under the current budgetary authority system and what is needed to actually build and operate this repository. Bottom line is that if we are not able to achieve this kind of funding requirement for this program, the repository will not get built. You will not be able to build the repository, then a required rail

line, do the engineering, do the procurements, buy the waste packages, buy the rail cars that are needed to execute this best achievable schedule at the kind of projected budgetary authority that right now the system is giving us.

So basically, unless we fix this issue and are able to achieve these cash flows to build this repository, the liability of the Federal Government and the U.S. taxpayers will continue to grow unabated.

One of the things I want to talk about just briefly is so how should we be funding this cash flow for this program? The Nuclear Waste Policy Act mandated that the generators of nuclear waste need to pay for its disposal. And they also determined that the program should not compete with other federal programs so that we could achieve these kinds of cash flows and build this repository on the shortest possible schedule.

Therefore, what Congress did back in the 1980s was to establish the Nuclear Waste Fund. And they established a fee to be charged to the nuclear generators and the Secretary of Energy has the capability to set that fee, which has been at one mil per kilowatt hour since the mid 1980s. That generates \$750 million of revenue for the Federal Government annually and any of that money that is not appropriated on an annual basis goes into the Nuclear Waste Fund.

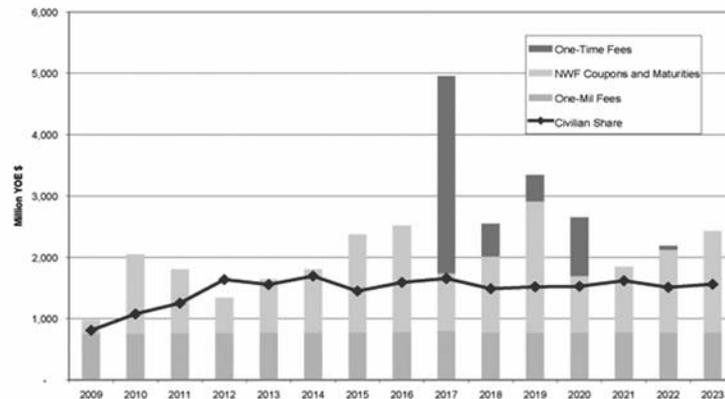
The Nuclear Waste Fund has a current balance on the books of about \$20.5 billion. A substantial amount of money. However, due to the passage of Gramm-Rudman-Hollings back in the mid 1980s, the Nuclear Waste Fund revenue fees have been classified as mandatory receipts and the program is classified as a discretionary program.

As a result, the fees are not dedicated to offset the appropriations on the program, and therefore, both the fees and the interest generated on the fund are used as offsets against the total federal deficit. Essentially, we have \$20.5 billion in the Nuclear Waste Fund, but we are not able to use it for its intended purpose to actually build the repository.

Can I have the next slide, please?

Program Cost Projections Compared to Nuclear Waste Fund Receipts

Civilian Nuclear Waste Fund Cost and Revenue Profile



Mr. SPROAT. The blue line on this graph shows you the civilian portion of the cash flow that I showed you on the previous slide. In other words, the civilian portion, which is about 80 percent of the total cost of the repository, what the civilian portion is to build and fund that cash flow that I just showed you.

What the gray bar on each of those years shows you is the \$750 million of revenue coming into the Federal Government from the nuclear waste generators. The yellow line is the interest being generated or projected to be generated on the Nuclear Waste Fund balance. What this chart shows you is that with the exception of one year, if the Department of Energy had access to the fees and the interest on the Nuclear Waste Fund, we could fund the entire construction and operation of the repository without even touching the corpus of the Nuclear Waste Fund.

However, eventually, after all the nuclear plants shut down, we will need to tap the corpus of the Waste Fund. But because the Nuclear Waste Fund has already been used as off-sets against the federal deficit on a per year basis, whenever funds are appropriated from the Nuclear Waste Fund they will need to be scored against the deficit.

And so we are either going to need to score them all at one time; we are going to need to score them a little bit at a time; or we will never score them and never spend the Nuclear Waste Fund. A decision needs to be made on how we are going to do that.

And I am here to submit to the Committee that taxpayers are incurring significant liability from both commercial spent nuclear fuel as well as government high-level nuclear waste that is still sitting at 121 sites around the country in 39 different States. The rate payers have paid into the Nuclear Waste Fund is over \$11 billion. The repository must be built for DOE to be able to meet its obliga-

tions under the Act and under our standard contracts. And that a funding mechanism to fund these cash flows for this repository must be put in place and must be fixed.

And we are asking the help of this Committee to help craft a solution to do that. And I will be happy to answer any questions after the other statements of the other witnesses.

[The prepared statement of Edward F. Sproat, III, follows:]

PREPARED STATEMENT OF EDWARD F. SPROAT III, DIRECTOR, OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Committee, I am Edward F. Sproat III, Director of the Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM). I appreciate the invitation to appear before the Committee to discuss the funding and liability issues associated with the development and operation of the Yucca Mountain repository. Your request to address the Government's financial position and future cash flows that impact the budget allows me the opportunity to discuss the much needed funding reform for the Program. Funding reform is vital to the Government's ability to build the repository and minimize the Government's existing liability.

I want to state my appreciation for the staff at the Department of Justice who have worked tirelessly on the 67 cases filed against the Government by the holders of the Standard Contract. I believe Mr. Hertz will address your questions regarding the lawsuits and payments from the Judgment Fund.

Minimizing the Government's liability associated with the unmet contractual obligations to move spent nuclear fuel from nuclear plant sites is one of the four strategic objectives for the Program that I set when I was confirmed. In the simplest of terms, the best way to reduce the Government's liability is to complete the Yucca Mountain repository and begin the acceptance of spent nuclear fuel from the Nation's nuclear reactor sites. Meeting the other three strategic objectives and fixing the broken funding mechanism for this Program is how the Government is to expedite the acceptance of spent nuclear fuel. The other three strategic objectives are to:

- Submit a high-quality and docketable License Application to the Nuclear Regulatory Commission (NRC) no later than June 30, 2008;
- Design, staff, and train the OCRWM organization such that it has the skills and culture needed to design, license, and manage the construction and operation of the Yucca Mountain Project with safety, quality, and cost effectiveness; and
- Develop and begin implementation of a comprehensive national transportation plan that accommodates State, local and Tribal concerns and input to the greatest extent practicable.

STATUS OF THE PROGRAM

In support of meeting these objectives, I am confident that in FY 2008 we will:

- Certify the Licensing Support Network in accordance with NRC requirements and regulations;
- Complete the Repository Supplemental Environmental Impact Statement;
- Submit the License Application for construction authorization to NRC by June, 2008 and begin its defense;
- Design the Transportation, Aging and Disposal canisters to be used by the industry to package and ship spent nuclear fuel to the repository;
- Deliver the report to Congress required by the Nuclear Waste Policy Act on the need for a second repository; and
- Resolve comments and issue the final environment impact statement for the Nevada Rail Line which is required to transport spent nuclear fuel to the repository.

FUTURE FUNDING—THE NEED FOR FUNDING REFORM

To have confidence in any milestones after 2008, it is imperative that the funding process for the Program allows the Nuclear Waste Fund and the annual receipts from the nuclear waste generators to be used for their intended purpose. The Nuclear Waste Policy Act established the requirement that the generators of spent nuclear fuel must pay for its disposal costs. As a result, the Nuclear Waste Fund was created and is funded by a 1 mil per kilowatt-hour fee on all nuclear generation in this country. As of today, the Fund has a balance of approximately \$20.7 billion which is invested in U.S. Treasury instruments. The Government receives approximately \$750 million per year in revenues from on-going nuclear generation and the

Fund averages about 5.5 percent annual return on its investments. The Secretary of Energy has the responsibility to annually assess the adequacy of the fee and is authorized to adjust it as necessary.

At the present time, due to technical scoring requirements, the Department cannot receive appropriations from the Nuclear Waste Fund equal to its annual receipts, interest, or corpus for their intended purpose without a significant recorded negative impact on the Federal budget deficit. The monies collected are counted as mandatory receipts in the budgetary process, and spending from the Nuclear Waste Fund is scored against discretionary funding caps for the appropriations process. The Administration proposed fixing this problem by reclassifying mandatory Nuclear Waste Fund fees as discretionary, in an amount equal to appropriations from the Fund for authorized waste disposal activities. Funding for the Program would still have to be requested by the President and appropriated by the Congress from the Nuclear Waste Fund.

The projected budget authority needed through repository construction is well above current and historic levels, and the current funding levels are insufficient to build the repository and the transportation system. If the Program is funded at its current levels without fixing the current funding mechanism, the shortfall in the funding needed would be between \$1.0 billion and \$1.5 billion per year. This funding shortfall will not allow the placement of the design and construction contracts for the repository or the transportation systems. In short, DOE will not be able to execute its responsibilities under the Nuclear Waste Policy Act and will not be able to set a date for meeting its contractual obligations. Government liability will continue to grow with no apparent limit.

In order for the Government to meet its obligations under the Nuclear Waste Policy Act, the funding mechanism for this Program must be designed to provide the following to DOE:

- Appropriations of amounts sufficient to allow funding of long term engineering, construction and procurement contracts; and,
- Authority to collect and utilize the fees from the nuclear waste generators for the management of spent fuel as required by the Nuclear Waste Policy Act and made available in the year they are received.

Funding from the annual Nuclear Waste Fund fees alone at the current 1 mil per kilowatt-hour level will not be sufficient to fund the Program at the required levels. The Administration will address the Program's funding needs in the context of developing the President's annual budget.

LIABILITY COSTS

Litigation settlements or damages are not paid from the Yucca Mountain Program appropriations. Rather, damages or settlement payments to utilities for the Department's delay are paid from the Judgment Fund, which is a permanent indefinite appropriation funded by taxpayer dollars. In 2002, the U.S. Court of Appeals for the 11th Circuit ruled that the Department was not authorized under the Nuclear Waste Policy Act to spend Nuclear Waste Fund monies on settlement agreements aimed at compensating utilities for onsite storage costs.

The estimated current potential liability is approximately \$7.0 billion which is predicated on the Department beginning operations at Yucca Mountain in 2017. Delaying the opening of the repository to 2020 could cost taxpayers as much as an additional \$4 billion from the Judgment Fund to pay damages.

PROGRAM COSTS

The Program has spent \$11 billion in 2000 constant dollars since 1983. The 2001 total life cycle cost estimate for the Program was \$57.5 billion in 2000 constant dollars, which included costs already incurred. The Program is expected to release a revised total system life cycle cost estimate shortly. The estimate will include the costs for accepting approximately 30 percent more spent nuclear fuel into the system and will estimate costs through the repository's closing in year 2133. Based on our recently completed Program schedule and cost estimate, annual funding will be needed at levels 2 to 3 times the current appropriations starting in FY 2009. If the requested fixes to the funding process are not put into place, DOE will not be able to set a credible opening date for the repository and Government liability will continue to grow.

Therefore, I respectfully urge the Congress to consider that it is in the taxpayers' best interest to provide funding reform to expedite the procurement activities, engineering and construction of the repository and the associated transportation systems. It will limit the taxpayer's burden of billions of dollars in liability and stop the waste of Nuclear Waste Fund dollars by delays due to inadequate funding.

Thank you for this opportunity to discuss these issues, and I would be pleased to answer any questions the Committee may have at this time.

Chairman SPRATT. Thank you very much, Mr. Sproat. Now lets turn to Mr. Hertz. And your statements, too, will be made part of the record.

STATEMENT OF MICHAEL F. HERTZ, DEPUTY ASSISTANT ATTORNEY GENERAL, CIVIL DIVISION, U.S. DEPARTMENT OF JUSTICE

Mr. HERTZ. Good morning, Mr. Chairman. I am happy to submit my statement for the record.

Good morning, Mr. Chairman, other members of the Committee, I appreciate this invitation to the Department of Justice to testify this morning.

I would like to touch on three points this morning. First, the origins of the litigation that we are now handling. Second, the current status of the litigation. And, third, some of the funding, the liabilities that we are facing in the litigation and the funding of that litigation.

As it has been stated, after the Nuclear Waste Power Act was enacted in 1983, DOE entered into 76 standard contracts with members of the commercial and nuclear utility industry. The contracts required that the Department of Energy, beginning in January of 1998, pick up spent nuclear fuel and store it. Utilities, as part of that contract, agreed to make quarterly payments into the Nuclear Waste Fund. And they have been making those payments since 1983.

In May 1995 the Department of Energy announced that it would be unable to begin acceptance of the spent nuclear fuel in January of 1998. A number of utilities went to the United States Court of Appeals for the District of Columbia to challenge that determination. The District of Columbia Court of Appeals determined that in fact DOE was required to pick up that spent nuclear fuel that the it was not conditioned on the opening of a repository but that was an obligation that the Department of Energy had to meet not withstanding the opening—of a failure to open repository.

Subsequent to that decision, the Department of Energy announced that it would still be unable to accept the waste and suggested that they might avoid liability pursuant to the unavoidable delays clause in the standard contract.

Utilities went back to the United States Court of Appeals for the District of Columbia Circuit and the Court again determined that DOE had a responsibility to pick up this material. They were not going to issue a mandatory writ ordering that it be picked up, because the Court determined that the utilities had an adequate contract breach remedy that they could assert. But they did order that the Department of Energy would not be allowed to rely on the unavoidable delay clause in the standard contract in defending any of those breach of contract actions.

With regard to the current status of the litigation, to date, the utility companies have filed 67 cases in the United States Court of Federal Claims. They seek damages largely for the cost that they have incurred to store spent nuclear fuel that they allege that the

Department of Energy would of been obliged to pick up had they not breached the contract.

The utility industry estimates that these claims will eventually total about \$50 billion, which far exceeds the approximate \$15.5 billion that the utilities have paid into the Nuclear Waste Fund. As you heard, DOE's most recent estimate of potential liability is \$7 billion based on a projected start date of the repository of 2017.

The United States Court of Appeals for the Federal Circuit to which the appeals from the Court of Claims go, has determined that the Department of Energy is in breach of its obligation to pick up this waste. They have determined that to date this constitutes a partial breach. Not a total breach of the contract. And that as such the utilities can seek damages only up to the point of time that they have filed their complaint.

What that means of course is that the utilities will have to go back to Court at least once every six years to file a new claims to comply with the statute of limitations and seek their damages for the preceding six year period. And what it also means is it will ensure that we will continue to litigate these cases until after DOE begins performance of the standard contracts.

Of the 67 suits filed, 56 cases remain pending either in the Court of Federal Claims or in the Court of Appeals for the Federal Circuit. Seven have been settled; two were voluntarily dismissed; and two have been litigated through final unappealable judgement.

While we have asserted legitimate defenses to these cases in litigation, we have also made concerted efforts to settle these cases. We have had settlements resolving seven of these cases and those seven cases have settled for \$255 million. In addition, there is one final unappealable judgement against the United States for \$35 million.

Of the 56 remaining cases, the Trial Court has entered judgement in eight and so far six of those have been appealed. The past damages in those eight cases total approximately \$420 million. Taking the judgements and the settlements together, although parts of the judgements are still subject to be challenged by the United States on appeal, the current government liability stands at \$710 million. This reflects essentially cost claimed by the utilities from 1998 through 2004 in the cases where we have nine judgements, and through 2006 for the seven settlements. What that suggests of cost is that there is a lot of liability still to be incurred for the dates after 2004 and 2006.

We have mentioned two significant issues that are on appeal in the United States of Court of Appeals for the Federal Circuit. The first relates to the unavoidable delay clause. Notwithstanding the D.C. Circuit's determination that the Department of Energy could not rely on that clause, which would be a complete defense to liability, a Court of Federal Claims Judge determined that his view was that the D.C. Circuit lacked jurisdiction to enter that writ of mandamus.

That decision has been appealed by the utility to the United States Court of Federal Claims—United States Court of Appeals for the Federal Circuit, and the briefing has been completed in that case. And at some point we will have arguments and get a decision

from the Federal Circuit about whether the United States can raise the unavoidable delay clause.

The second significant issue in a number of the appeals deals with the scope of the government's obligation regarding the amount of spent nuclear fuel that had to be accepted under the standard contract. The utilities claims are uniformly premised upon arguments that DOE was contractually obligated to accept much larger amounts of spent nuclear fuel on an annual basis than the government believes that the obligation to be. And we will get, hopefully, a decision from the Court of Appeals for the Federal Circuit again on that issue as well.

Finally, a word about the source of funding for the government's liability and the litigation cost that we are facing. To date, all of the settlements and all of the judgements have been paid from the Judgement Fund. The government's initial position was that in fact the Nuclear Waste Fund should be available to pay for these judgements and settlements, but the United States Court of Appeals for the 11 Circuit interpreting the statute determined that that fund was not available to pay for settlements and judgements.

This of course means that the Judgement Fund, as you know, is essentially a bottomless pit in terms it doesn't require annual appropriations. And the Department of Energy is not responsible, the Nuclear Waste Fund is not responsible for paying any of these damages not withstanding that presumably a large portion of those damages deal with storage costs that otherwise would have been borne by the Department of Energy had they been able to perform under the contract.

With regard to litigation costs, to date, the Department of Justice has spent almost \$95 million. This involves about \$17 million in attorney costs, \$55 million in expert funds, and \$22 million in litigation support cost in defense of these suits. We are averaging about 12—the equivalent of 12 attorneys per year working on these cases. This is relatively lean staffing. We are up against large utilities. We have had to date trials in 13 cases. We expect over the next year to have trials in six cases. These trials generally last two to four weeks, one lasting as long as eight weeks.

In the next year, just to give you an example, currently we are in trial on a case where the claimant is seeking \$91 million. Next month we go to trial on a case where the claimant is seeking \$90 million. In January a case where the claimant is seeking \$53 million. In April of 2008 two cases where the claimants are seeking \$52 million in one case and \$123 million in another case. And finally in October of 2008 this case is scheduled to go to trial where the claimant is seeking \$96 million. All in all in excess of a half of a billion dollars going to trial in the next year.

As I said, these cases will continue to be filed, because these cases only deal with the partial breach up through the date those complaints will be filed. We are looking at litigation at least through 2017 and potentially beyond or at least liability through then and beyond. And the government will continue to incur liability until DOE is able to perform on these contracts.

I thank you for your patience and I look forward to your questions.

[The prepared statement of Michael F. Hertz follows:]

PREPARED STATEMENT OF MICHAEL F. HERTZ, DEPUTY ASSISTANT ATTORNEY
GENERAL, CIVIL DIVISION, U.S. DEPARTMENT OF JUSTICE

Mr. Chairman, and members of the Committee, I am Michael F. Hertz, and I am a Deputy Assistant Attorney General of the Department of Justice, Civil Division. I am pleased to testify today regarding the status of litigation concerning the Department of Energy's obligations under the Nuclear Waste Policy Act (NWPA) of 1982.

Let me note at the outset that much of the litigation about which you have asked the Department of Justice to provide testimony is still pending in the Federal courts. As a result, the Department's pending matter policy applies to any discussion of those cases. Pursuant to that policy, I will be happy to discuss matters that are in the public record.

BACKGROUND

In 1983, pursuant to the NWPA, the Department of Energy (DOE) entered into 76 standard contracts with entities, mostly commercial utilities, that were producing nuclear power. Through the standard contracts, DOE agreed that by January 31, 1998, it would begin accepting spent nuclear fuel and high-level radioactive waste collectively, (SNF) created by the utilities. In return, the utilities agreed to make quarterly payments into the Nuclear Waste Fund (NWF) created by the statute. The utilities began making payments into the NWF in 1983.

In 1987, Congress designated Yucca Mountain in Nevada as the sole site for a Federal repository for disposal of the SNF. DOE has been unable to begin construction of the federal repository, however, and anticipates that it will be unable to begin SNF acceptance until at least 2017.

In May 1995, DOE published a notice in the Federal Register advising the utilities that held standard contracts and others that DOE would be unable to begin acceptance of SNF on January 31, 1998. The notice also explained that DOE's acceptance beginning on that date was conditioned upon the existence of an operational repository. 60 Fed. Reg. 21793 (May 3, 1995).

In response to this notice, several nuclear utilities filed suit in the United States Court of Appeals for the District of Columbia challenging DOE's understanding. The District of Columbia Circuit held that DOE was required to begin SNF acceptance in some type of facility by January 31, 1998. See *Indiana Michigan Power Co. v. Department of Energy*, 88 F.3d 1272, 1277 (D.C. Cir. 1996). After DOE continued to inform utilities that it would be unable to begin accepting SNF by January 31, 1998, the utilities again sued and requested an order directing that DOE perform under the Standard Contract. The District of Columbia Circuit denied the utilities' request and instead found that the utilities' remedy could be addressed through breach of contract claims. *Northern States Power Co. v. United States*, 128 F.3d 754, 759 (D.C. Cir. 1997), cert. denied, 525 U.S. 1015 & 1016 (1998). The court did, however, issue an order that barred DOE from asserting that its delays in performing the standard contract were (unavoidable), and, therefore, excused pursuant to the (unavoidable delays) provision of the standard contracts.

STATUS OF COURT OF FEDERAL CLAIMS LITIGATION

To date, utility companies have filed 67 cases in the United States Court of Federal Claims, alleging that DOE's delay in beginning SNF acceptance constituted a breach of contract. The Court of Appeals for the Federal Circuit, in *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336 (Fed. Cir. 2000), has ruled that the delay constitutes such a breach.

The utilities' damages claims largely are for the costs incurred to store SNF that they allege DOE would have accepted from them absent the breach. Specifically, storage costs that utilities allege they would not have expended had DOE begun timely performance under the Standard Contract. In addition, several utilities have alleged damages arising from the (diminution-in-value) of their plants as the result of DOE's delay, claiming that they realized these damages when they sold their plants to other utilities as part of the sale.

Utility industry reports estimate that the claims will total about \$50 billion, which far exceeds the amount the utilities have paid into the NWF pursuant to the Standard Contract. DOE's most recent estimate of potential liability is \$7 billion, based upon a projected start date of 2017. These estimates do not fully take into account the Government's defenses or the possibility that plaintiffs will be able to prove the full extent of their claims.

In the first case to proceed to trial on the merits in March 2004, the trial court found that the utility had not incurred any damages as a result of the partial breach

of contract through the date of trial and denied any monetary recovery, although it ruled that the utility may return to court if and when it incurs damage because of the delay in spent fuel acceptance. *Indiana Michigan Power Co. v. United States*, 60 Fed. Cl. 639 (2004). In affirming this ruling on appeal, the appellate court held that all claims for breach of the standard contracts may only be through the date of the complaint and that utilities must file new complaints with the trial court seeking damages as they are incurred. *Indiana Michigan Power Co. v. United States*, 422 F.3d 1369 (Fed. Cir. 2005).

As a result of this ruling, utilities must file new cases with the trial court at least every six years to recover any costs incurred as the result of DOE's delay, and we will continue to litigate these claims until after DOE begins performance of the standard contracts. We recently received our first new complaint implementing this ruling, filed by Northern States Power Company, which was filed shortly before the trial court issued a decision on the first claim filed by Northern States in 1998.

Of the 67 lawsuits filed, 56 cases remain pending either in the Court of Federal Claims or in the Court of Appeals for the Federal Circuit, seven have settled, two were voluntarily withdrawn, and only two have been litigated through final unappealable judgment.

While asserting legitimate defenses to plaintiffs' claims in litigation, we also have made concerted efforts to settle claims. The settlements resolving seven of the cases involve four companies: Exelon Generation, LLC, South Carolina Electric & Gas Company, Omaha Public Power District and Duke Power Company. These settlements provide for the periodic submission of claims to the contracting officer for costs incurred since the date of the last submission. In total, the Government has paid \$290 million pursuant to these settlements and one trial court judgment that was not appealed.

Of those 56 pending cases, the trial court has entered judgment in eight, and so far six of those have been appealed. The past damages awarded in these eight judgments total approximately \$420 million, with the trial court holding that the plaintiffs could return to court after they had incurred additional damages as a result of DOE's delay. Between judgments and settlements, the Government's liability currently stands at \$710 million. This reflects costs claimed by utilities from 1998 through 2004 for the nine judgments, and through 2006 for the seven settlements.

The following chart summarizes the status of the 67 cases that have been filed:

Number of cases	Status/Comments
2	Voluntarily withdrawn
7	Settled (settlements cover 1998 through 2006)
2	Final unappealable judgments (judgments cover 1998 through 2004)
6	Final judgments on appeal (judgments cover 1998 through 2004)
2	Final judgments/time to appeal has not yet run (judgments cover 1998 through 2004)
48	Pending/no judgment (includes new complaint filed August 2007)
67	Total

SIGNIFICANT ISSUES ON APPEAL

There are two major issues that should be decided in the pending appeals which will have a significant effect upon the Government's continuing liability in these cases. The first issue concerns the Government's ability to present a defense based upon the (unavoidable delays) clause in the contracts. As noted, the District of Columbia Circuit, in *Northern States*, mandated that the Government could not rely upon such a defense in its litigation of delay claims arising from its breach. One of the trial court judges at the Court of Federal Claims found the District of Columbia Circuit's writ of mandamus to be void and that DOE is entitled to raise the (unavoidable delays) defense. *Nebraska Public Power District v. United States*, 73 Fed. Cl. 650 (2006). That ruling is on appeal to the Federal Circuit and, if affirmed, the Government may be able to pursue an absolute defense to the utilities' damages claims.

The second major issue to be decided in the cases on appeal is the scope of the Government's obligation to utilities regarding the amount of SNF to be accepted. The utilities' claims are uniformly premised upon arguments that DOE was contractually obligated to accept much larger amounts of SNF on an annual basis than the Government believes that obligation to be. This issue is squarely presented in several of the pending appeals and, depending upon how the appellate court decides

the issue, will significantly inform the size of the damages awards that utilities receive in these cases.

PAYMENT OF JUDGMENTS AND SETTLEMENTS

To date, all payments to the utilities have come from the Judgment Fund. In *Alabama Power Co. v. United States Department of Energy*, 307 F.3d 1300 (11th Cir. 2002), the Court of Appeals for the Eleventh Circuit ruled that the Government could not use the NWF to pay for any of the damages that the utilities incur as a result of DOE's delay. The only other available funding source that has been identified to date is the Judgment Fund. We are also unaware of any statutory requirement that DOE be required to reimburse the Judgment Fund for judgments paid, unlike other statutory schemes that govern the adjudication of contract and other monetary disputes with the Government.

LITIGATION COSTS

The costs to the Government to litigate these cases are significant. The Department of Justice has expended approximately \$17 million in attorney costs, \$55 million in expert funds and \$22 million in litigation support costs in defense of these suits. These costs represent nearly a third of the expenditures since 1998, for the component within the Civil Division responsible for litigating these suits. In addition, DOE and the Nuclear Regulatory Commission have expended many manhours to support this effort. Given that these cases will continue to be filed and litigated into the foreseeable future, these costs will continue to be incurred.

Although these cases are similar in dollar amount to other cases defended by the Commercial Litigation Branch of the Department of Justice, these cases are distinct in two key aspects. First, the standardized contract at issue requires the Government to provide the services at issue and the utilities pay the costs for those services, rather than the reverse. Second, the Government will continue to incur liability for its inability to perform these contracts until after DOE begins to accept SNF waste—either at Yucca Mountain or some other facility—in amounts that DOE would have accepted if performance had begun in January 1998.

In summary, the SNF litigation has already cost the Government significant sums in terms of liability and litigation costs and will most likely continue to do so into the foreseeable future.

The CHAIRMAN. Lets turn to Kim Cawley who is the Chief of the Natural and Physical Resources Cost Estimates Unit at the Congressional Budget Office.

Mr. Cawley, welcome this morning. We will put your statement in full in the record and you can summarize it as you see fit. Thank you for coming.

STATEMENT OF KIM P. CAWLEY, UNIT CHIEF, NATURAL AND PHYSICAL RESOURCES COST ESTIMATES UNIT, CONGRESSIONAL BUDGET OFFICE

Mr. CAWLEY. Thank you, Mr. Chairman, Congressman Ryan, members of the Committee. Happy to be here this morning to discuss the Nuclear Waste Program. I would like to emphasize just a couple points from my written statement.

It is likely that the Nuclear Waste Program will add to the size of the federal deficit in future years for two reasons. First, that the Department obtains regulatory approvals to proceed with building the facility of plans for Yucca Mountain. Projected spending for that construction will exceed the annual fees of \$800 million—\$700 million that are paid each year by utilities for the disposal service.

And second the Courts have held that taxpayers, not nuclear power customers, must bear the cost of the delay in the disposal program that has occurred since 1998. So far the Judgement Fund has paid about \$300 million in compensation to utilities.

On my first point, since 1993 when the Waste Fund was established on the budget, utilities have paid about \$15 billion in fees

towards their share of a permanent waste repository. Spending from the fund over that same period has been less than the fees collected by about seven billion dollars. Because nearly all the receipts and spending in the federal budget are recorded on a cash basis, we could say that so far the Waste Fund has contributed to reducing the size of past deficits. But that situation can be reversed if the Department is able to proceed with construction and it receives annual appropriations in the future that are larger than the Fund's annual income. At that point the Programs operations would be adding to the size of deficits or reducing the size of surpluses in the future.

Just on my second point about payments from the Judgement Fund. The Judgement Fund is a permanent appropriation, permanent authority to pay for all kinds of judgements and settlements against the government. For example, in 2006 the Fund paid over 8,000 individual claims of all kinds ranging from traffic accidents to medical malpractice and contract disputes. Over the past ten years payments from the Fund have averaged about \$1.2 billion a year. How much the Fund will pay in future nuclear waste settlements is uncertain.

DOE has estimated those damage claims could amount to \$7 billion to \$11 billion depending on when the waste site could begin operating. Those estimates are for the sum of total claims that might be paid over 30 years or more. Ultimately, the size of the claims will depend on the types of damages that the courts allow and how long it takes DOE to move the waste from individual utility storage sites.

Finally, I wanted to mention the legal capacity of the Yucca Mountain site. Under the Waste Policy Act 70,000 metric tons of waste could be sent to that facility, but commercial plants and the government's own waste from its Defense Programs have already generated about 65,000 tons. The industry now produces around 2,000 tons a year so all of that legal capacity will be spoken for soon, years before the site could open. Without a solution to that capacity limit, taxpayer liabilities for waste disposal could grow for the waste expected from current plants that are operating today as well as for many new power plants that might be built.

Thanks again for the opportunity to be here. And I would be happy to answer any questions about my written statement.

[The prepared statement of Kim P. Cawley follows:]

PREPARED STATEMENT OF KIM CAWLEY, CHIEF, NATURAL AND PHYSICAL RESOURCES
COST ESTIMATES UNIT, CONGRESSIONAL BUDGET OFFICE

Mr. Chairman, Congressman Ryan, and Members of the Committee, I am pleased to appear before you today to discuss issues related to the Federal Government's liability under the Nuclear Waste Policy Act of 1982 (NWPA).

My testimony today makes the following points:

- By law, the Federal Government is responsible for permanently disposing of spent nuclear fuel generated by civilian facilities, which pay fees for that waste disposal service. Regardless of how the government meets that responsibility, discharging those liabilities will require significant federal spending over many decades.
- The Nuclear Waste Policy Act authorized a system to manage radioactive waste, including an underground repository to permanently dispose of spent nuclear fuel from civilian facilities. Currently, the Federal Government is 10 years behind schedule in its contractual obligations to remove and dispose of such waste; by the time the repository might be opened, it is likely to face at least a 20-year waste backlog.

- In the absence of a federal underground repository to accept nuclear waste for storage, taxpayers are now starting to pay—in the form of legal settlements with utilities—for a decentralized waste storage system at sites around the country. (Those payments are being made from the Department of the Treasury’s Judgment Fund.) The Department of Energy (DOE) currently estimates that payments to utilities pursuant to such settlements will total at least \$7 billion, and possibly much more if the program’s schedule continues to slip. Regardless of whether or when the government opens the planned repository, those payments are likely to continue for several decades.

- Ultimately, the repository that is now authorized under NWPAA will not provide sufficient capacity to store all of the waste for which the Federal Government is responsible. The statutory cap on the amount of waste that can be stored there is significantly lower than the volume of waste that DOE expects will be generated during the lifetimes of existing nuclear facilities, let alone the additional volume from any new facilities that may be built. Without a change in law to allow construction of disposal facilities with sufficient capacity to accommodate all of the waste that will be generated, taxpayers will need to pay utilities to dispose of a substantial amount of additional waste in the future.

- Contractual liabilities associated with nuclear waste from civilian power plants are one component of the government’s broader liabilities for remedying environmental contamination, much of which results from operating the nation’s nuclear weapons complex.

THE FEDERAL GOVERNMENT’S RESPONSIBILITIES UNDER THE NUCLEAR WASTE POLICY ACT

The Nuclear Waste Policy Act gave the Federal Government statutory responsibility for permanently disposing of spent nuclear fuel generated at civilian nuclear reactors and for disposing of radioactive waste generated as a result of federal activities related to the manufacturing of nuclear weapons. Under the law, the Federal Government, through the Department of Energy, faces substantial costs to establish a federal repository for the nation’s nuclear waste. It has also incurred contractual obligations to remove waste from civilian nuclear facilities.

Under NWPAA, the Federal Government will have to spend tens of billions of dollars over many decades to fulfill its obligations to dispose of waste from the current generation of civilian nuclear reactors. The government will also be responsible for waste from any new facilities that may be brought online in the future. However, the waste from those new facilities cannot be accommodated in the repository envisioned under NWPAA because of statutory constraints on the amount of waste the repository can store.

THE FEDERAL REPOSITORY AUTHORIZED FOR YUCCA MOUNTAIN

The Nuclear Waste Policy Act authorized DOE to build a geologic repository to permanently store up to 70,000 metric tons of spent nuclear fuel generated by civilian nuclear power plants and high-level radioactive waste generated by federal facilities. Under current law, Yucca Mountain in Nevada is the only place where such a repository may be located. To proceed with construction and operation of the facility, DOE must apply for and receive a license from the Nuclear Regulatory Commission (NRC). DOE expects to submit that application for authority to begin constructing the repository in 2008. (To date, many of DOE’s activities have focused on analyses required to support the license application.) If the NRC approves the application within three years and if other key regulatory requirements are subsequently met, DOE expects the planned repository at Yucca Mountain to begin accepting waste in 2017, although the department has recently indicated that this planned schedule could slip further.¹

The law also addressed how the disposal of spent nuclear fuel and defense-related waste was to be paid for. Under NWPAA, the costs for disposing of the waste are to be borne by the parties that generate it, and the law authorizes DOE to levy fees on the nuclear power industry to cover those costs. The law also authorizes appropriations from the Treasury’s general fund to pay for disposing of high-level radioactive waste generated by the nation’s defense programs.

Table 1.

Federal Cash Flows to and from the Nuclear Waste Fund

(Billions of nominal dollars)

	Cumulative Totals, 1983 Through 2006	CBO Estimate, 2007
Deposits		
Annual fees	13.3	0.8
One-time fees	1.5	0
Subtotal, fees	14.8	0.8
Interest credited ^a	10.9	0.8
Total, Deposits	25.7	1.6
Disbursements	6.7	0.2
Balance	19.0	20.4 ^b
Memorandum:		
Appropriations for Defense-Related Activities		
Budget authority	3.1	0.3

Sources: Congressional Budget Office; Department of Energy.

a. Intragovernmental transfers from general revenues.

b. Cumulative fund balance.

The cash flows since 1983 for major components of the nuclear waste disposal program (summarized in Table 1) are described in the following sections.

FINANCING THE COST OF DISPOSING OF CIVILIAN NUCLEAR WASTE

Starting in 1983, NWPA authorized DOE to charge electric utilities fees to cover the cost of disposing of the nuclear waste they generate. Utilities today pay annual fees at a rate of 1 mil (0.1 cent) per kilowatt-hour of electricity generated and sold by nuclear power plants. The fees, which are recorded in the budget as mandatory offsetting receipts (a credit against direct spending), are deposited into the Nuclear Waste Fund, or NWF (a special fund in the Treasury that records cash flows associated with the civilian nuclear waste program). Amounts in that fund are available for spending only to the extent provided in annual appropriation acts. Under NWPA, DOE is required to periodically review and, if necessary, adjust those fees to ensure that the fund has sufficient resources to pay for disposing of the utility industry's nuclear waste. DOE has not increased that annual charge since 1983.

In addition to the ongoing yearly fees, NWPA established one-time fees to cover the cost of disposing of waste that was generated before the law was enacted. DOE provided utilities with several options for paying that one-time charge, but several utilities have not yet paid the fee, and a significant amount remains uncollected.

The Nuclear Waste Policy Act authorized appropriations from the Nuclear Waste Fund to cover the costs of the civilian nuclear waste program and also permitted DOE to borrow from the Treasury (subject to approval in appropriation acts) if balances in the fund were insufficient to cover the program's immediate costs. (The law stipulates that amounts borrowed from the Treasury must be repaid from future fee collections.) In addition, the law authorized the Secretary of the Treasury to invest the fund's unspent balances in nonmarketable Treasury securities, which are credited with interest.

As shown in Table 1, \$25.7 billion has been credited to the NWF from its inception in 1983 through the end of fiscal year 2006. That amount includes fees paid by the nuclear industry totaling \$14.8 billion as well as \$10.9 billion from intragovernmental transfers of interest earnings. Cumulative expenditures from the fund during that period totaled about \$6.7 billion, mostly for analyses related to the waste disposal program and for appropriations to DOE for initial design work on the Yucca Mountain facility. The NRC and other federal entities also received modest appropriations from the fund for work related to the program, leaving an

unspent balance of about \$19.0 billion at the end of 2006. The Congressional Budget Office (CBO) estimates that in 2007, another \$1.6 billion was credited to the fund—half of which came from fees and half from interest. Expenditures in 2007 totaled \$0.2 billion, bringing the fund's current balance to \$20.4 billion, in CBO's estimation.

If all of today's 104 licensed nuclear reactors continue to generate electricity, future annual receipts from industry fees are likely to average between \$750 million and \$800 million. Most U.S. nuclear power plants began operating in the mid-1970s or during the 1980s under 40-year licenses. The NRC has approved 20-year extensions to the licenses of nearly half of the plants in operation today, and it anticipates that many of the others will apply for such licenses. When those plants reach the end of their license extensions (or their economically useful lives) and cease operations—probably in the 2030s and 2040s—they will pay no additional fees to the Nuclear Waste Fund to cover long-term costs related to their waste.

Receipts from the one-time fees that remain unpaid and become due once the federal repository is opened currently amount to about \$3 billion, DOE estimates.² Interest accrues on the balances due from those one-time fees until the utilities pay them to the government. Also accruing and adding significantly to the fund's balances are credits of interest on the fund's unspent dollars. Those amounts are intragovernmental transfers and do not create net receipts to the Federal Government. However, they do add to the resources that are authorized to be used for the waste disposal program.

FINANCING THE COSTS ASSOCIATED WITH DEFENSE-RELATED NUCLEAR WASTE

In addition to the amounts appropriated from the fees and interest credited to the NWF, the Congress has made annual appropriations to the nuclear waste program to cover the costs that DOE estimates are related to the disposal of nuclear waste generated by federal defense programs. In 2001, DOE determined that just over one-fourth of the total costs of the waste disposal program are attributable to the disposal of defense-related nuclear waste and that this share of the program's total costs should be paid for with appropriations from the general fund of the Treasury.³ Since 1993, the Congress has provided nearly \$3.4 billion from the general fund for such costs.

ESTIMATES OF TOTAL LIFE-CYCLE COSTS

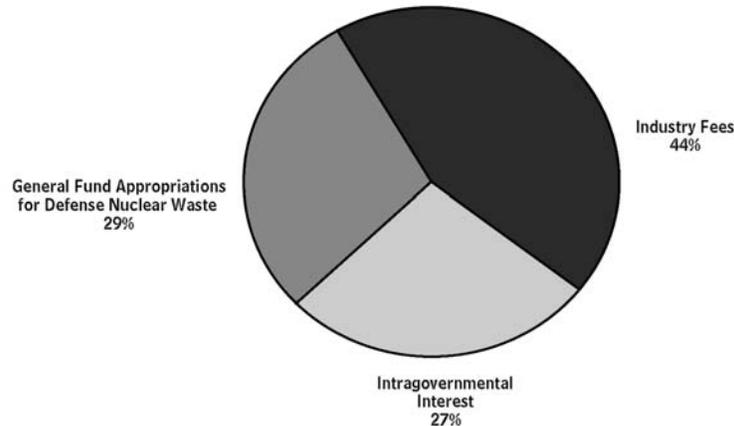
In 2001, DOE published an estimate of the total costs—including transportation and project management—associated with the planned underground nuclear waste disposal facility. In DOE's estimation, the project would cost \$57.5 billion in 2000 dollars (with an associated range of accuracy of plus or minus 40 percent) over an operating period of more than 100 years.⁴ DOE estimated that nearly three-fourths of the facility's total life-cycle costs would be attributable to waste generated by civilian facilities; the remaining portion would be attributable to defense-related waste.

DOE also published a study in 2001 reporting on whether the annual fee charged for nuclear waste disposal would generate enough money in the Nuclear Waste Fund—including the interest anticipated on unspent fees—to pay for the estimated life-cycle costs associated with disposing of civilian waste.⁵ In that study, key findings of which are summarized in Figure 1, DOE estimated that fees paid by commercial nuclear power plants would cover 44 percent of the program's total costs, and interest credited to unspent NWF balances of fees would cover 27 percent. DOE assumed that appropriations for costs attributable to defense-related waste would cover the remaining 29 percent of total costs.

Using its 2001 program design as a reference case, DOE determined that the annual fee (plus accrued interest) was likely to generate sufficient balances to cover the estimated costs of civilian waste disposal. The agency reaffirmed that determination in 2002 but has not completed an updated study of fee adequacy since that time.⁶

Figure 1.

Projected Sources of Funds for Total Life-Cycle Costs of the Nuclear Waste Disposal Program



Source: Department of Energy.

Note: Costs were calculated as 2000 dollars.

Judgments about whether the fee is adequate are highly sensitive to estimates of certain key variables, such as project costs and inflation. Determinations of adequacy are also sensitive to estimates of the interest credited to the fund—estimates that are a function of interest rates and fund balances, which in turn depend on projections of appropriated spending from the fund. In CBO's view, DOE's 2001 and 2002 analyses used reasonable economic assumptions, but it is unclear whether other assumptions—particularly those related to the program's scope and costs—are still an appropriate basis for determining the adequacy of utilities' annual fees. For example, because many plants have received 20-year license extensions, the total volume of waste that those plants are expected to generate—and thus the scope of a federal program necessary to manage it—have increased significantly since 2001. An updated analysis would need to take that factor into account, as well as the impact of escalating construction costs and delays in the scheduled opening of a federal repository. The Government Accountability Office, looking back, found that many DOE construction projects involving complex technologies had exceeded their original estimates of costs and experienced delays in their schedules.⁷

FEDERAL CONTRACTUAL OBLIGATIONS AND LIABILITIES FOR NUCLEAR WASTE

Under contracts signed with electric utilities pursuant to NWPA, DOE was scheduled to start removing waste from storage sites at individual power plants for transport to a federal storage or disposal facility by 1998. DOE documents suggest that the planned underground nuclear waste disposal site at Yucca Mountain will not be ready to accept waste before 2017—or nearly 20 years late.⁸ Moreover, that schedule assumes that legislation, which has not been enacted, will make changes to the nuclear waste program—in particular, to simplify key regulatory procedures. Without those changes, according to DOE, the actual date that the agency begins to accept waste is likely to be even later.

After the Federal Government missed its 1998 contractual deadline to start collecting waste, electric utilities began—successfully—to sue the government for damages incurred as a result of the agency's failure to meet that deadline. In seeking to resolve the initial lawsuits, DOE anticipated that it would pay court-awarded damages to individual utilities from amounts appropriated from the Nuclear Waste Fund or by issuing credits to those utilities (to reduce their future fee payments to the fund) in the amount of the damages that had been awarded.

In 2002, however, the U.S. Court of Appeals for the Eleventh Circuit held that DOE could not use the Nuclear Waste Fund to pay the damages resulting from the government's breach of its contracts.⁹ According to the court, the costs of interim storage incurred by the utilities because of the breach were not within the uses of the fund that were permitted under NWPA. Also, the court pointed out, the department would inevitably raise future fees to compensate for any such payments—so that the injured utilities would ultimately bear the costs of the contract breach if they were paid from the fund. In addition, utilities that did not litigate their claims would end up paying larger fees to cover the cost of damage claims made by other utilities. Agreeing with the parties that brought the lawsuit, the court stated that making utilities contribute to a fund that disproportionately paid the storage costs of other utilities would raise a serious constitutional “takings” question. Following the court's decision, the government subsequently paid damages to the utilities from the Treasury's Judgment Fund.

THE JUDGMENT FUND

The Judgment Fund is a permanent, indefinite appropriation from the Treasury that is available to pay final judgments and awards against the United States that cannot legally be paid from any other existing appropriation.¹⁰ (The fund has no fiscal year limitations, and there is no need for the Congress to appropriate money to replenish it.) The fund provides the authority for the government to pay for most court judgments and settlement agreements entered into by the Department of Justice to resolve actual or imminent lawsuits against the Federal Government. Generally, agencies are not required to reimburse the Judgment Fund for payments made on their behalf unless the Congress appropriates money specifically for that purpose.

JUDGMENTS AWARDED AND PAID TO UTILITIES UNDER THE NUCLEAR WASTE POLICY ACT

Under the Department of Justice's settlements with electric utilities, utilities have been reimbursed for the actual costs they incurred because of DOE's partial breach of its contracts. Such costs are unique to each nuclear power plant and depend partly on the age and operating status of the plant and the size and configuration of the plant's available space for nuclear waste storage.

The Judgment Fund has paid \$290 million to four electric utilities as compensation for the costs they incurred because the Federal Government could not begin to accept nuclear waste for disposal in 1998. That amount includes a payment of \$35 million to the federally owned Tennessee Valley Authority. The government has appealed (or may appeal) judgments worth another \$337 million. Five additional trials for damages have been completed and are awaiting judgments, and 44 other cases have not yet been tried. Because judicial claims for damages are made retrospectively, many more cases can be expected in the coming decades as utilities seek to recover their ongoing costs for storing nuclear waste long after they expected it to be removed to a permanent disposal site.

FUTURE SETTLEMENTS UNDER THE NUCLEAR WASTE POLICY ACT

Litigation is ongoing regarding how to calculate damages for DOE's partial breach of its contractual commitments. DOE currently estimates that if the agency begins to accept waste in 2017, taxpayers' total liabilities to electric utilities will total roughly \$7 billion (in today's dollars). Further, it anticipates that payments from the Judgment Fund will span a number of decades after 2017.¹¹

DOE's estimate of future damages is uncertain and is predicated on the department's views of the types of additional business and waste storage expenses that the courts will determine are appropriate and reasonable and should be paid by DOE. Those determinations will depend on such factors as the estimated rate at which DOE would have removed waste from a particular facility if the agency had been able to accept waste in 1998. If utilities successfully argue that the waste-acceptance rate used for the purpose of calculating damages should exceed the rate used in DOE's projections of liabilities, costs would probably surpass \$7 billion.

Similarly, costs may be greater if the courts take a broader view of the types of expenses for which utilities should be compensated. Although the Federal Government is responsible for the permanent disposal of nuclear waste, individual utilities are responsible for storing the waste until it can be delivered to a permanent storage facility. Because the site characteristics of individual utilities vary, the determination of incremental expenses incurred at particular sites must be made on a case-by-case basis and will ultimately depend on the courts' views, which could differ from DOE's.

Estimates of liabilities will increase if the schedule for completing the planned repository slips further and waste continues to accumulate at utilities' storage sites. For example, according to DOE, estimated liabilities will increase from \$7 billion to \$11 billion if the agency starts accepting waste in 2020.¹² And even then, it will face a backlog that, at best, will take more than 20 years to eliminate. As long as the agency remains behind schedule, taxpayers will continue to incur liabilities.

THE OUTLOOK FOR THE FEDERAL GOVERNMENT'S LIABILITIES

The Nuclear Waste Policy Act sets the storage capacity of the Yucca Mountain site at no more than 70,000 metric tons. DOE estimates that roughly 65,000 metric tons of existing spent nuclear fuel and high-level defense waste are currently slated for disposal there. The nation's existing nuclear power plants generate another 2,000 metric tons of waste per year. If they continue to produce waste at that rate, the total volume will exceed Yucca Mountain's statutory capacity within a few years, well before the repository is scheduled to open.

As a result, without a change in law to expand the Yucca Mountain facility or designate another site for disposal, there will be insufficient capacity to dispose of wastes generated over the lifetimes of the nuclear power plants that are operating today. The resulting waste storage compensation payments to utilities from the Judgment Fund for waste that cannot be permanently disposed of would add significantly to federal liabilities.

Moreover, the NRC has announced that it expects to receive applications for licenses to build 32 new nuclear power plants in the next few years. If constructed, each of those plants would produce around 20 metric tons of waste per year, or about 1,000 metric tons over a 40- to 60-year period of operations. Such plants would also pay fees to the Nuclear Waste Fund, and their waste would become a federal liability because under NHPA, nuclear plants are required to sign waste disposal agreements with DOE. Without additional storage capacity, that waste could become an additional liability of the Judgment Fund.

ACCOUNTING AND BUDGETING FOR FEDERAL LIABILITIES

The Federal Government issues two different reports on its fiscal performance: the budget and The Financial Report of the United States Government. The budget largely measures cash flows in and out of the Treasury. The financial report, by contrast, primarily uses an accrual basis of accounting to measure assets, liabilities, revenues, and expenses. The principal difference between accrual and cash accounting is the timing of the recognition of transactions: An accrual system generally recognizes them when an economic event occurs rather than when the resulting cash flows take place.¹³

On the federal balance sheet, liabilities reflect obligations of the Federal Government that result from prior actions but that will require financial resources in the future. Regardless of whether or how particular liabilities are captured on the federal balance sheet, the budget records cash flows related to those liabilities when the flows occur.

RECORDING NUCLEAR WASTE DISPOSAL CASH FLOWS IN THE BUDGET

Over the 1983–2006 period, the fees paid by nuclear utilities under NHPA totaled \$14.8 billion, whereas expenditures totaled only \$6.7 billion. As a result, the nuclear waste disposal program has reduced the cumulative net deficit (and thus the need for federal borrowing) by about \$8 billion.

Because receipts to the Nuclear Waste Fund have exceeded spending, balances have grown significantly since the fund's inception, and significant amounts of interest have been credited to the fund. Intragovernmental interest is not a budgetary receipt and does not affect the size of annual deficits; however, it does add to the total amount of resources authorized to be made available for nuclear waste disposal.

Going forward, any future expenditures from the Nuclear Waste Fund in excess of annual receipts from industry fees—that is, drawing down the balances in the fund or spending the interest being credited to the fund—will increase annual deficits or reduce future surpluses. Under current budgetary procedures, all spending from the fund is considered discretionary and counts against the appropriation committees' spending allocations. Income from fees, by contrast, is recorded on the mandatory side of the budget.

ENVIRONMENTAL AND DISPOSAL LIABILITIES ON THE FEDERAL BALANCE SHEET

Along with DOE's liability for the costs of disposing of civilian nuclear waste, the Federal Government has substantial liabilities related to the costs of mitigating hazardous and radioactive waste that the government generated (or is required, by law or regulation, to remediate). Most of those liabilities involve the contamination of soil, water, and facilities at thousands of sites, contamination that arose from operating the nation's nuclear weapons complex. Federal financial statements prepared by the Department of the Treasury indicate that over the next 75 years, the government faces more than \$300 billion in costs to clean up, dispose of, and monitor that contamination.¹⁴

ENDNOTES

¹ Statement of Edward F. Sproat III, Director, Office of Civilian Radioactive Waste Management, Department of Energy, before the Subcommittee on Energy and Water Development of the House Committee on Appropriations, March 28, 2007.

² Data supplied to the Congressional Budget Office in September 2007 by the Department of Energy's Office of Civilian Radioactive Waste Management.

³ Department of Energy, Office of Civilian Radioactive Waste Management, Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program, DOE/RW-0533 (May 2001).

⁴ *Ibid.*

⁵ Department of Energy, Office of Civilian Radioactive Waste Management, Nuclear Waste Fund Fee Adequacy: An Assessment, DOE-RW-0534 (May 2001).

⁶ Bechtel SAIC Company, L.L.C., Total System Life Cycle Cost for Site Recommendation: Letter Report, TDR-CRW-AD-000001 REV 00 (prepared for the Department of Energy, Office of Civilian Radioactive Waste Management, February 2002).

⁷ Government Accountability Office, Department of Energy: Major Construction Projects Need a Consistent Approach for Assessing Technology Readiness to Help Avoid Cost Increases and Delays, GAO-07-336 (March 2007).

⁸ Statement of Edward F. Sproat III, March 28, 2007.

⁹ *Alabama Power Co. v. United States*, 307 F.3d 1300 (2002).

¹⁰ In 2006, more than 8,000 individual payments from the Judgment Fund amounted to nearly \$0.7 billion; over the past 10 years, such payments have averaged around \$1.2 billion annually. Most of the payments are made to settle claims related to federal employment, torts, property loss, discrimination, medical malpractice, and contract disputes.

¹¹ Statement of Edward F. Sproat III, March 28, 2007.

¹² *Ibid.*

¹³ For more discussion, see Congressional Budget Office, Comparing Budget and Accounting Measures of the Federal Government's Fiscal Condition (December 2006).

¹⁴ See Department of the Treasury, Financial Management Service, 2006 Financial Report of the United States Government, available at www.fms.treas.gov/fr/06frusg/06frusg.pdf.

Chairman SPRATT. Thank you very much. Mr. Sproat, I think it would help us if you went back and explained a bit more deliberately the fiscal situation we have now with respect to classification of receipts on the one hand, and expenditures on the other. And why there is a mismatch that dooms your program to being under funded on into the future.

Mr. SPROAT. Okay. Thank you, Mr. Chairman. This is certainly not my area of expertise and I suspect the Committee's staff is much more well versed in this than I am, but I will give it an attempt.

When the Nuclear Waste Policy Act was passed and the basic premise of requiring that waste generators to pay for the cost of disposal was set, the concept that the Congress set up was a one mill per kilo-watt hour fee paid for by the utilities based on their generation. The Secretary of Energy had the responsibility on an annual basis to assess the adequacy of that fee to allow the Department to fully carry out its responsibilities under the Nuclear Waste Policy Act, with the idea being that on an annualized basis any of that amount of fee that was not appropriated in that year of receipt would be placed into the Nuclear Waste Fund. And that the Nuclear Waste Fund would be used to pay for the actual construction and operation of the repository well into the future until it was eventually closed.

When Gramm-Rudman-Hollings—when the bills were passed in the mid 1980s that set up the concept of mandatory and discretionary receipts and expenditures, the fees coming into the Nuclear Waste Fund were classified as mandatory receipts. And the Program was treated as a discretionary Program. And as I think I understand how this works, basically you can't use mandatory receipts to offset the appropriations for discretionary programs.

And so as a result we ended up with this mismatch between what the fees were to be used for versus how they were actually being used. But the surplus of fees coming in on an annual basis continued to be positive, and as a result, the Nuclear Waste Fund has continued to grow. My organization, my office has the responsibility to manage that fund. We have a laddered portfolio of treasury instrument, zero coupon bonds, and T-Bills. And we manage that to return between 5.3 and 5.5 percent a year, which sounds very good. And that is how we got to a \$20.5 billion balance in the Nuclear Waste Fund.

Unfortunately, because those revenues come in on an annual basis, that \$750 million a year is generating interest, which is basically an interagency transfer on the books within the Treasury. The interest being generated on the funds those two revenue streams or I should say those dollars are treated as offsets in the current year they are booked. And as a result that \$20.5 billion in the Waste Fund, while it is there on the books, if and when that money is needed to actually build the repository it will be scored as deficit spending, because it is already been accounted for in the books in the year the revenue was booked.

Chairman SPRATT. So what you are asking is that the funds coming in by virtue of the fee payments and classified as offsetting mandatory receipts be instead made offsetting receipts for discretionary spending?

Mr. SPROAT. That is correct. That is at least one of the solutions we will need to put in place to help solve this problem.

Chairman SPRATT. Do you know to which account or which appropriations bill the offsetting receipts, mandatory offsetting receipts now go? Is it in the Energy and Water appropriations?

Mr. SPROAT. It is Energy and Water Appropriations. I have a copy of the 2008 Energy and Water Appropriations bill language here. And both the receipts show up as a line item that says, "Intra fund transactions earning on investments, Nuclear Waste Fund, \$954 million and proprietary receipts from the public Nuclear Waste Fund, \$770 million."

Chairman SPRATT. And you are saying if you are able to use those receipts for this program alone without offsetting them against an extraneous program, another program, and also are given credit for interest accruing on the balances, you will have funds through the foreseeable future adequate to meet your obligation?

Mr. SPROAT. That is correct.

Chairman SPRATT. Construction obligation?

Mr. SPROAT. That is correct, Mr. Chairman.

Chairman SPRATT. Let me ask you this, Mr. Hertz, has the issue been raised in any of this litigation that this is a trust fund and that the funds deposited to it are imbued with that trust? They are

obligated and encumbered and therefore the Court can direct that the monies accumulating in this trust fund be used for their intended trust purpose?

Mr. HERTZ. Well, the only litigation that I am aware dealing with the fund itself is whether the fund was available to pay settlements and judgements. And to those extent that those settlements and judgements are essentially damages for storage that would of otherwise been done under the contract, that the contract had not been breached, you have the situation where the Judgement Fund is essentially paying part of the expenses that otherwise would of been bourne by the Nuclear Waste Fund.

But the Court ruled against the government's position in that case and said that the statutory language of the Nuclear Waste Policy Act did not allow the Department of Energy to take funds from the Nuclear Waste Fund and pay settlements for the breach of contract.

Chairman SPRATT. Of course that involves some equity about those who are paying in may have to pay twice. But has the issue been raised and litigated that this is a trust fund that the monies deposited to it accredited to it have a particular purpose and that the government as trustee is obligated to fulfill that purpose with the funds available?

Mr. HERTZ. Not that I am aware of.

Chairman SPRATT. You think it is a valid argument?

Mr. HERTZ. I would have to take it back and think about it. I am not sure—in other words—I am not sure. I think it is contemplated that the funds are going to be used to build the repository and to operate the repository. I don't know that it has been litigated yet in terms of how the funds have actually been treated for budget purposes and whether there is anything improper about that.

Chairman SPRATT. Mr. Sproat, are you getting an appropriation from the Energy and Water Appropriations bill of about \$350 to \$400 million a year?

Mr. SPROAT. Yes, Mr. Chairman. We requested for fiscal year 2008, \$495 million. The House appropriated \$495 or \$494.5 and the Senate appropriated approximately \$50 million less than that. And we are waiting to see what happens here through the continuing resolution.

Chairman SPRATT. And do you also have available to you the interest is credited to the trust fund account?

Mr. SPROAT. No, sir, I don't.

Chairman SPRATT. You can't draw it down without an appropriation either?

Mr. SPROAT. That is correct.

Chairman SPRATT. It is credited to your account, but it is not available to you?

Mr. SPROAT. That is correct.

Chairman SPRATT. And is that because of PayGo considerations at this point in time?

Mr. SPROAT. I guess I am not the best person to answer that question, Mr. Chairman. I could certainly take that question for the record, but I might suggest—

[Mr. Sproat's response for the record follows:]

Amounts in the Nuclear Waste Fund are available only to the extent provided in annual appropriations. Under current budgetary procedures, all spending from the Fund is considered discretionary and counts against the Appropriation Committees' spending allocations. Income from fees, by contrast, is recorded on the mandatory side of the budget. Any expenditure from the Nuclear Waste Fund in excess of annual receipts from industry fees—that is, drawing down the balances in the fund or spending the interest being credited to the fund—will increase annual deficits or reduce future surpluses. PayGo considerations, therefore, play a role in the calculations only in terms of spending against the corpus of the Fund or the interest earned, but not for spending the annual income from the utility fees collected.

Chairman SPRATT. Mr. Cawley, do you have an opinion about that?

Mr. CAWLEY. Yeah. I would say that the budgetary classification of the cash flows related to the Nuclear Waste Program are laid out in the 1982 Energy Policy Act. In that Act it specifies that the fees be considered as offsetting receipts for a business like activity. They are mandatory collections. They are not dependant upon any other future action of the Congress.

The collection of those fees really has nothing to do with the annual appropriations process. That is a separate activity. So those the Act envisioned that the fees would be collected and credited with any interest earnings on the unspent balances.

The Act clearly says that amounts from the fund should be made available through the appropriations process, annual decisions that the Congress makes to decide the funding levels.

In addition, maybe I wasn't clear, that the Department sort of receives two different appropriations. It receives an appropriation from the Nuclear Waste Fund as well as an appropriation from the general fund for the portion of the repository that is considered a cost of the Defense Programs and will be used by the Defense Programs.

Chairman SPRATT. Well is the Energy and Water Subcommittee using these receipts as mandatory offsetting receipts that free up spending on mandatory programs under their jurisdiction?

Mr. CAWLEY. Just like all kinds of other offsetting receipts or revenues, those receipts offset all federal spending.

Chairman SPRATT. All for—

Mr. CAWLEY. They are not particularly designated to an individual committee or anything like that. No.

Chairman SPRATT. Okay. Mr. Ryan.

Mr. RYAN. Thank you, Chairman. Kim, let me—let me go down this path a little bit farther.

So we are getting these mandatory receipts coming in. It is to the tune of how much each year right now on average?

Mr. CAWLEY. Seven fifty.

Mr. RYAN. Seven fifty. And that creates \$750 million of room under the 302 "A" which can then be allocated how ever the Appropriation Committee determines?

Mr. CAWLEY. Those receipts aren't credit in the appropriations process. They are mandatory receipts.

Mr. RYAN. No, I realize that. They are mandatory receipts, but they are offsetting, right?

Mr. CAWLEY. No.

Mr. RYAN. Okay. Let me ask it a different way. I understand your point. What is the delta between what we are—and this is, I think, for you Mr. Sprout. What is the delta between what we are

spending now and what we need to be spending to meet your deadline in 2017?

Mr. SPROAT. Yeah, Mr. Ryan, the chart that I showed that had the—

Mr. RYAN. Yeah.

Mr. SPROAT [continuing]. Blue and the orange. That shows you our projected annual budget authority requirements to meet the 2017 date. And that delta, those cash flow budget authority requirements are fluctuating between \$1.3 to \$1.9 billion a year.

Mr. RYAN. And we are at?

Mr. SPROAT. And right now we are at approximately \$450 million a year.

Mr. RYAN. Four fifty?

Mr. SPROAT. Yes.

Mr. RYAN. Okay. And we are bringing in \$750 million?

Mr. CAWLEY. Correct.

Mr. SPROAT. Seven fifty plus the interest on the fund.

Mr. RYAN. And the interest on the fund annually is approximately?

Mr. SPROAT. Is approximate about \$900 million.

Mr. RYAN. Okay. And if we met those targets the discretionary spending would have to go up by that amount from the Energy and Water Committee, correct?

Mr. CAWLEY. The way things are currently. So I—yeah.

Mr. RYAN. Right. Okay. Mr. Sproat, what is the projection on the life of Yucca on how long can it operate continuing to take all of the waste from around the country at the pace that we currently project—

Mr. SPROAT. Sure.

Mr. RYAN [continuing]. It is going to be produced?

Mr. SPROAT. In the Nuclear Waste Policy Act there was an administrative limit of 70,000 metric tons of heavy metal content spent nuclear fuel and high-level waste that could be put in Yucca Mountain.

The Administration has submitted legislation to the Congress to lift that 70,000 metric ton limit and let the Nuclear Regulatory Commission decide what the maximum allowable technical limit should be. With that 70,000 metric ton limit with the existing fleet of nuclear plants, and no new nuclear plants being built, the 70,000 metric tons will be fully committed by early 2010.

So in other words, Yucca Mountain will be full under the 70,000 metric ton administrative limit in another two, two and a half years.

Mr. RYAN. What is the estimate as to the maximum capacity of the site? Regardless of the statutory limit, what is the—

Mr. SPROAT. Sure.

Mr. RYAN [continuing]. What do you project to be the maximum capacity?

Mr. SPROAT. In our environmental impact study of the site that we did in preparation for the site recommendation as well as the supplement to that, which we are about ready to release, we have evaluated about 135,000 metric tons.

Mr. RYAN. Okay. And what is the—

Mr. SPROAT. Which is the full expected inventory to be discharged from the existing fleet of nuclear plants.

Mr. RYAN. Okay. Okay. So Yucca is big enough to handle 135,000?

Mr. SPROAT. We believe it is at least big enough to handle that.

Mr. RYAN. Okay. And the 135,000—

Mr. SPROAT. Technically.

Mr. RYAN [continuing]. Is the full output of all the fleet of current fleet of plants?

Mr. SPROAT. That is correct.

Mr. RYAN. And that takes us to what year?

Mr. SPROAT. The last plant—I don't have the exact—I will have to get back to you with the exact year. We—that projects to the last of those plants would shut down. It is somewhere in the 2035, 2040 range. Maybe a little bit earlier than that.

Mr. RYAN. So the best case scenario, funding occurs, you hit your deadlines. Best case scenario is it is filled up by 20—somewhere in the middle of 2030s?

Mr. SPROAT. Yes.

Mr. RYAN. And then we have to figure out something else?

Mr. SPROAT. Obviously at that point in time we would know whether or not there are additional nuclear plants being built.

Mr. RYAN. Right.

Mr. SPROAT. Assuming we get a license to build the repository, this issue of what the maximum limit will come probably in front of the Congress because one of the other things the Nuclear Waste Policy Act requires is that the Secretary of Energy needs to report to Congress no later than January of 2010 on the need for a second repository.

We are going to provide that report to Congress in 2008. Probably in the first half of 2008. And based on just straight very easy math, we need a second repository if the 70,000 metric ton limit isn't changed.

Mr. RYAN. Okay. Thank you.

Chairman SPRATT. Thank you, Mr. Ryan. Mr. Berry.

(No response.)

Chairman SPRATT. Mr. Moore.

(No response.)

Chairman SPRATT. Mr. Porter. I think you have a question or two.

Mr. PORTER. Thank you, Mr. Chairman. Of course my perspective is that of seeing it first hand and I think maybe, Director, if you could take a moment and just describe this hole. What it is.

Mr. SPROAT. I think your previous description of a tunnel is very accurate. The Yucca Mountain site is located on the nuclear test site in South Western Nevada on federal land. It is adjacent to the Nellis test range in Southwestern Nevada, about 100 miles outside of Las Vegas.

It is a ridge of mountain ranges out there. And the actual repository would be located off a tunnel that goes through a mountain ridge and the nuclear waste would be placed about 1,000 feet below the surface in that mountain ridge.

Mr. PORTER. And you said that with a straight face. I appreciate that, because it—we had a chance to tour it together and I appreciated your time.

But, Mr. Chairman, this has to be the largest earmark in the history of our country. A \$50 billion earmark that has an insatiable appetite while Congress turns a blind eye to it is an incredible waste of money.

But what I would like to know is, again Director, I appreciate working with you through the years. Can you explain for this body how literally we had to change the whole science in the last year because of finding faults in the documents?

Mr. SPROAT. I would say, Congressman, that is probably not an accurate characterization. We didn't find—I am assuming you are referring to this Bow Ridge fault question that has come up recently?

Mr. PORTER. Actually it is about the science that we—we had the emails where scientists were changing the information. So you have spent \$27 million changing the—

Mr. SPROAT. Yes.

Mr. PORTER [continuing]. Information because it wasn't accurate.

Mr. SPROAT. And that particular issue has to do with models that were developed by the U.S. Geological Society, USGS on how much water would infiltrate into the repository from rainfall. And so the key issue was from emails, there were emails discovered by the Department of Energy, which we made public, that indicated that at least there was a perception that some of the scientist were working and developing these mathematical models on water infiltration were "fudging the data."

So there was—

Mr. PORTER. Excuse me. But you then re-did the science.

Mr. SPROAT. We basically did an investigation. There was both a criminal and a civil investigation. We had independent reviews of the work they did and as an added level of confidence we basically developed a whole separate independent infiltration model by Sandia National Labs. And that independent model is the one we are going to use.

But the Congressman is correct. We spent a lot of money investigating this issue and redoing some of the work to make sure we got it right.

Mr. PORTER. Thank you. Thank you, Mr. Chairman.

Chairman SPRATT. Mr. Simpson.

Mr. SIMPSON. Thank you. I thank you all for being here today. I appreciate the work you are doing. I know it is a tough job and a thankless job. I think most of us understand you have been trying to get it. But I appreciate the job you are doing down there. It is very difficult. But first let me ask Mr. Hertz a couple of questions.

You mentioned these funds that are being paid—these court cases that there is a claim for like \$91 million and another one case coming up for \$56 million or something like that. Is that for the cost that the utility has incurred in storing the spent nuclear fuel that should of been accepted by the government or are there other liability cost that are included in there? Are there pain and suffering costs?

Mr. HERTZ. No, no. Well, you know, that is the claim. And the legal basis for the claim is the expenditures they made that wouldn't otherwise have to make. And we will be litigating whether all those expenditures were the result of the breach whether some of those expenditures would of been necessary regardless whether there had been no breach. But the legal theory is it is not pain and suffering or anything like. It is really and it should be you know the cost that they incurred.

Mr. SIMPSON. Actual cost?

Mr. HERTZ. Yeah.

Mr. SIMPSON. This has been being paid out of the Judgement Fund for some time, but it is an anticipated cost. We know that it is out there. Should this be continued to be part of the Judgement Fund or should DOE start budgeting for it in their annual budget?

Mr. HERTZ. Well the Judgement Fund is available when there is no other available fund to pay—and it is the only time the Judgement Fund is available

Mr. SIMPSON. Right.

Mr. HERTZ [continuing]. When there is no other available fund. So the only available fund that we were aware of was the Nuclear Waste Fund and the Court said that is not available. I think at this point what you are looking at is if you wanted to change that, that would require new legislation to make either the Nuclear Waste Fund available or some other fund available to pay these judgements.

Mr. SIMPSON. Mr. Sproat, you mentioned this 70,000 metric tons available. You said that that was an administrative limit. Is it a statutory limit, administrative, or?

Mr. SPROAT. Thank you for that clarification. It is a statutory limit that is contained in the Nuclear Waste Policy Act.

Mr. SIMPSON. And so that it would take the legislation that you have submitted to Congress in order to change that statutory limit?

Mr. SPROAT. Yes, sir.

Mr. SIMPSON. Is—obviously, I shouldn't say obviously, I guess. The Nuclear Waste Fund is not being used to build the repository in the way it was anticipated, I wouldn't suspect?

Mr. SPROAT. It is not being used at all right now at this stage of the game, other than on an annual basis its interest component is offsetting general government deficits.

Mr. SIMPSON. We have a lot of trust funds that do that. Whether it is the Aviation Trust Fund, the Harbor Trust Fund, Inland Waterways Trust Fund, the Highway Trust Fund. Anytime they build a surplus it is used to offset the size of the deficit. We have taken some action as an example in the transportation area to spend down that trust fund. If the taxpayers are paying that money for a specific purpose and the roads are getting bad, we assume that it was a good idea to spend the money on building the roads. Isn't the same thing true here that the rate payers that have paid this kilowatt tax assume this is being used to build the repository to take care of the spent nuclear fuel?

Mr. SPROAT. Yes, sir, they do assume that. I am both a nuclear rate payer in Pennsylvania and I am a taxpayer. So I am paying for both the judgements and into the Nuclear Waste Fund. And it is a very frustrating experience. And I know I am not alone in that.

Mr. SIMPSON. It is frustrating to me that I don't know why it would take a legislative change to or fix to change that so that the Appropriations Committee could be using the trust fund to pay the cost of building the repository.

Mr. SPROAT. I would—

Mr. SIMPSON. I guess I haven't got it clear in my mind what we have got to do yet.

Mr. SPROAT. I would defer to Mr. Cawley to answer that.

Mr. CAWLEY. I guess the current budgetary treatment we have is the budgetary treatment that the Congress wanted to have in 2000—or excuse me—in 1982.

And you mentioned the Highway Trust Fund and the Aviation Fund and a few other funds like that where revenues in one form or another or fees in one form or another are brought into the government. And Congress makes annual decisions about how much of that money will be appropriated.

This is a similar situation where Congress is making annual decisions about how much of this money should be appropriated.

Mr. SIMPSON. It wouldn't take any changes to the Budget Act or anything like that to change how we spend that trust fund?

Mr. CAWLEY. We are spending the trust fund now. It is spent through annual decisions made by the Appropriations Committee. What isn't happening is that the monies being collected are considered a mandatory receipt and they do not accrue to any credit to the Appropriations Committee. You know, nor do the revenues for example from the Highway gasoline tax accrue to the Appropriations Committee.

Mr. SIMPSON. So this is all paper?

Mr. CAWLEY. I don't know what you mean.

Mr. SIMPSON. It is all paper stuff. It is figures on a piece of paper is what it is.

Mr. CAWLEY. Well I think the issue—

Mr. SIMPSON. To make one thing look bigger than, you know, to make the deficit look smaller than it is or something else. And—

Mr. CAWLEY. All of the revenues being collected from nuclear rate payers are offsetting the deficit. They are not at this moment offsetting the spending decisions made by the Appropriations Committee individually but they are offsetting all spending.

Mr. SIMPSON. Mr. Sproat, we mentioned that you had—that I think the House Appropriations Committee appropriated the full amount that you had requested—

Mr. SPROAT. That is correct.

Mr. SIMPSON [continuing]. \$495 million.

Mr. SPROAT. For fiscal year 2008. That is correct, sir.

Mr. SIMPSON. Yeah. And we had the discussion here that we are going to be spending one and a half to two billion dollars is going to be necessary in the future. I assume this testimony is going to be cleared with OMB?

Mr. SPROAT. Yes, sir.

Mr. SIMPSON. And we are anticipating those costs in the future. But we are fully funding what you have requested in the current year?

Mr. SPROAT. In the current year—well assuming we will see how the continuing resolution goes, but as of right now the answer to

that is yes. We will have to see what happens in conference between the House and the Senate what number comes out of that.

Mr. SIMPSON. As soon as Yucca Mountain is open, the liabilities don't drop to zero.

Mr. SPROAT. No, that is correct. And—

Mr. SIMPSON. Because it takes a while to move waste there and—

Mr. SPROAT. Yes, sir. That is exactly the point I wanted to show—I intended to show with the very first slide that I put up which showed the yellow line and the crossover between the green and red lines. That indicates the year that we will catch up and that liabilities will continue to accumulate even after Yucca is open until we hit that catch up point.

Mr. SIMPSON. I am—I have heard the numbers tossed around on the actual liability of what we pay annually in these costs. That we spend about a billion dollars a year in costs because we haven't opened Yucca Mountain yet.

Is that—they say it is about \$500 million in liability cost but there is another \$500 million a year cost for the government nuclear materials that should of gone to Yucca Mountain. Is that anywhere near an accurate number? Am I just throwing things out there?

Mr. SPROAT. Well I think in terms of the civilian component from the civilian nuclear plants, our working assumption and based on those graphs I showed you that on average, and it does vary from year to year and it varies by time period. But on average we are expecting that the liability to the commercial sector is about a half a billion dollars per year of delay on average.

But in addition to that there is the defense liability. And when I say, obviously, we don't—the government doesn't owe liability payments to itself. But 20 percent of the repository is earmarked, plus or minus, for defense waste both Naval nuclear spent fuel, defense waste that is currently at Hanford from the Legacy Defense programs. All of that is going to Yucca and it can't be moved until the repository opens.

So obviously there are added costs to the government to keep the existing government storage facilities open at about a half a billion dollars a year is probably not a bad number and maybe is even a little low.

Mr. SIMPSON. Okay. When we talk about the 70,000 metric tons, you said 20 percent of it give or take is set aside for defense nuclear waste?

Mr. SPROAT. That is correct.

Mr. SIMPSON. So it is not just a matter of when we reach a total of 70,000 metric tons across the country. As I understand it there is not a path forward for some of the defense nuclear waste that currently exist?

Mr. SPROAT. That is correct.

Mr. SIMPSON. Tough job. But it—

Mr. SPROAT. Somebody has got to do it.

Mr. SIMPSON. Somebody has got to do it and ultimately other countries are facing this same problem. France, as you know, is trying to find a deep repository for their waste. So is Scandinavia and some other places. And hopefully I know that Mr. Porter has

a different opinion on that. And I understand that. But hopefully we will keep on schedule.

What is your thoughts of actually being able to meet the 2000—you know that is your best estimate of 2017. What is your realistic estimate?

Mr. SPROAT. Well I have been asked that question before in hearings and my answer is that best achievable is not necessarily the most probable. And on the critical path to achieving that date is the getting the license application to the Nuclear Regulatory Commission. We will get that license application in or before the date I set last year of June 30, 2008.

Once it is in to the NRC, the Nuclear Waste Policy Act gives the NRC three years to do their review and make their decision with a fourth year if they come back to Congress and say they need a fourth year.

Our 2017 date assumes that three year period. Personally, they are going to need at least the fourth year, because this is a first of a kind regulation; a first of the kind facility anywhere in the world. So it is going to take a while.

In addition, there is clearly going to be litigation associated with this. And how long that litigation takes, whether or not there are stays placed on the construction authorization, if we get it, who knows.

So I would say more likely that licensing period from the time we submit to the time we actually get authorization to build, assuming we do, it is probably more around seven years—six to seven years as opposed to three years.

All that said though, if we don't address this issue of funding and this delta between the existing \$450 million a year versus \$1.9 billion a year to execute that critical path cash flow, it will never ever get built.

Mr. SIMPSON. Right.

Chairman SPRATT. Will the gentleman yield?

Mr. SIMPSON. Certainly.

Chairman SPRATT. What is the limitation, when do you hit the limit of what can be stored on site?

Mr. SPROAT. The 70,000 metric tons?

Chairman SPRATT. Right.

Mr. SPROAT. That the repository—

Chairman SPRATT. No, not at Yucca Mountain but at individual nuclear reactor sites around the country.

Mr. SPROAT. That varies. I used to be a vice president at Peco Nuclear and at Excelon and have some experience in this.

Each of the nuclear power plants has a wet spent fuel storage pool adjacent to the reactor. And they were designed when the plant was built for varying lengths of time. But just about all of those—just about all plants now have those pools either filled or very close to capacity. And as a result a number of plants have already started taking fuel out of the pool, putting them in casks and putting them outside on pads in interim spent fuel storage facilities. Storing them dry in those casks.

Most plants have a lot space on their sites and could probably continue to store that fuel on interim basis on their sites. So it really does vary from plant to plant.

Mr. SIMPSON. Safety wise, we would be better off having a nuclear repository in Yucca Mountain or 121 sites with nuclear waste stored on site?

Mr. SPROAT. Well, having been personally involved in licensing the spent fuel and the spent fuel storage facility at our at the Peach Bottom Plant that Excelon owns, it is a very safe means of storage. However, we currently have between the civilian sites and the government sites 121 different sites around the country with either spent nuclear fuel or high level radioactive waste in 39 different States.

It would seem to me the prudent thing to do is put it all in one place.

Mr. SIMPSON. Have we thought about has DOE looked at interim storage? The possibility of interim storage taking ownership of this spent nuclear fuel around the country building an interim storage facility and—

Mr. SPROAT. Yes, sir, we have to an extent. Let me explain. That solution has been offered by a number of people of a way of minimizing the continued growth of liability, regardless of what happens with Yucca Mountain. Why doesn't the Department take title and take possession of the spent nuclear fuel and either manage it where it is at the reactor sites or condense it and put it into centralized locations at either one or several government sites.

That idea would require legislation. The Department is prohibited by the Nuclear Waste Policy Act of doing any interim storage until Yucca Mountain gets a construction authorization from the Nuclear Regulatory Commission.

So, number one, that would require legislation. Assuming we would get that legislation, the second question is so we had that authority now we have to start spending money on finding a site or sites, doing the environmental impact studies, doing the engineering, getting a license for that facility, and buying the transportation casks. The question comes, so are we really saving time and money by taking that approach?

In my judgement the answer is no.

Mr. SIMPSON. One final question, if I could ask it? When a license is applied for today for a new nuclear facility, they have to have a path to disposal of their nuclear waste, don't they?

Mr. SPROAT. They will have to show the Nuclear Regulatory Commission that they have a contract with the Federal Government so that the Federal Government is committed to eventually taking their spent nuclear fuel.

Mr. SIMPSON. How is that going to happen if Yucca Mountain is not open? We don't know if it is going to open. What is the path they are going to show?

Mr. SPROAT. They would need to have a contract or an amendment to the existing standard contract signed between the Federal Government and the potential licensee indicating under what terms the Federal Government would accept their spent nuclear fuel.

And we are currently in the process of drafting such an amendment to the standard contract.

Mr. SIMPSON. Before the Federal Government is going to sign any contract like that, they are going to have to have some assurance that they are going to have a place to put it.

Mr. SPROAT. That is correct.

Mr. SIMPSON. Thank you.

Chairman SPRATT. Mr. Porter, you have some parting shots? [Laughter.]

Mr. PORTER. Thank you, Mr. Chairman. Just to highlight, 1982 Michael Jackson's song "Thriller" was popular when we started this project. And I think that was very appropriate. It has been a thriller of ride seeing, like I said, the largest earmark in the history of the country. If I had asked for this earmark, can you imagine what this Congress would say? So again, thank you for this opportunity.

I have had numerous opportunities with our panel and I appreciate your being here and thank you very, very much.

Mr. SPROAT. You are welcome.

Chairman SPRATT. Thank you very much. Mr. Sproat, Mr. Hertz, Mr. Cawley, thank you very much. You have enriched our understanding of this, not that we have ready solutions, but we certainly understand it better. We have gained some insight and we will take under advisement.

Thank you very much for your participation today.

Mr. SPROAT. Thank you, Mr. Chairman.

Mr. HERTZ. Thank you.

[Responses to Mr. Barrett's questions from Mr. Sproat follow:]

RESPONSES TO MR. BARRETT'S QUESTIONS FOR THE RECORD FROM MR. SPROAT

Q1a. The goal laid out in the Nuclear Waste Policy Act was to begin loading commercial waste into the Yucca Mountain repository in 1998, but due to several circumstances, DOE now does not expect to open the facility until 2017 at the earliest. This delay has led to substantial costs for the federal government because it has failed to live up to its contractual obligations to move this waste from commercial sites. What do you estimate the cost incurred by the federal government will be for each year that the opening of Yucca Mountain is delayed past the 2017 date due to liability costs for waste remaining at commercial sites?

A1a. The Department notes a mistake in one of the premises of this question. Although the question indicates that the "goal laid out in the Nuclear Waste Policy Act was to begin loading commercial waste into the Yucca Mountain repository in 1998," the United States Court of Appeals for the District of Columbia Circuit in *Indiana Michigan Power Co. v. United States Department of Energy*, 88 F.3d 1272 (D.C. Cir. 1996), has held that the 1998 acceptance date was not tied to the repository and that, although the Department was obligated to begin accepting commercial waste at some facility by 1998, the Nuclear Waste Policy Act did not obligate it to have a repository in place by that date. Nevertheless, the Department acknowledges that it has not yet been able to open any facility for commercial waste acceptance, and the Department is currently focusing all of its efforts on the development of a repository, rather than some alternative storage facility.

The Department estimates that U.S. taxpayers' potential liability to contract holders who have paid into the Nuclear Waste Fund will be approximately \$7.0 billion if the Department begins to accept spent nuclear fuel in 2017. If, as a result of expected delays due to limitations on funding and other factors, the opening date for the repository is 2020, the estimated potential liability will increase to approximately \$11 billion. Although the increase in estimated potential liability is not a linear function, as a general matter, the average potential increase is approximately \$500 million for each year the opening of the repository is delayed. There will also be added costs associated with keeping defense waste sites open longer than originally anticipated. The Department has not yet estimated those costs. It can be seen, however, that each year of delay in opening the repository has significant taxpayer cost implications.

Q1b. What can Congress do to ensure the plans at Yucca Mountain continue on schedule?

A1b. The Congress can pass the Administration's proposed legislation or similar legislation to provide funding reform for the Yucca Mountain Program in a budget-neutral manner. Funding reform can facilitate the Department's access to the Nuclear Waste Fund as intended in the Nuclear Waste Policy Act.

The Administration's proposed legislation will allow the Department to receive appropriations from the Nuclear Waste Fund equal to its annual receipts from utilities. Funding for the Program would still have to be requested by the President and appropriated by the Congress from the Nuclear Waste Fund.

Q2. Furthermore, I understand there [sic] some issues with DOE being able to access monies within the Nuclear Waste Fund for construction of Yucca Mountain. I know a few legislative fixes have been suggested by both the Administration and Members of Congress. Are there any additional approaches available to resolve the funding issues for Yucca Mountain?

A2. The Administration is committed to work with Congress to resolve the funding issue. The Administration has proposed legislation to fix the funding issue by reclassifying mandatory Nuclear Waste Fund fees as discretionary in an amount equal to appropriations from the Fund for authorized waste disposal activities. Alternative approaches to resolve the funding issue have been reviewed in the past. Some of these approaches, such as the use of a revolving fund, are set forth and discussed in *Alternative Means of Financing and Managing the Civilian Radioactive Waste Management Program* (<http://www.ocrwm.doe.gov/about/pm/pdf/amfm-report.pdf>), a report issued by the Department in 2001.

[Responses to Mr. Barrett's questions from Mr. Cawley follow:]

December 19, 2007.

Hon. J. GRESHAM BARRETT,
Committee on the Budget, U.S. House of Representatives, Washington, DC.

DEAR CONGRESSMAN: This letter responds to your questions concerning the Congressional Budget Office's testimony before the House Budget Committee on October 4, 2007, regarding the Nuclear Waste Disposal Program.

1. What is your estimate of the federal liabilities that would be incurred each year if the Yucca Mountain nuclear waste disposal facility is unable to accept waste in 2017 and the Department of Energy (DOE) must continue to reimburse utilities for the costs of onsite storage of waste?

CBO has no independent estimates of the federal government's liabilities to electric utilities resulting from DOE's partial breach of contractual obligations to accept nuclear waste from civilian facilities. DOE currently estimates that if the agency begins to accept such waste in 2017, taxpayers' liabilities will total roughly \$7 billion (in 2007 dollars). DOE further estimates that for each additional year that schedule is delayed, liabilities will increase by at least \$500 million, reaching \$11 billion by 2020 if the agency begins to accept waste that year.

2. Are there any additional approaches available to resolve the funding issues for Yucca Mountain—particularly related to DOE's access to funds within the Nuclear Waste Fund?

One alternative to providing the department with annual appropriations from the Nuclear Waste Fund would be to change the law and give the department access to the trust fund balances without further appropriation action. Providing such authority would result in new direct spending, however.

The Nuclear Waste Fund is credited with waste disposal fees paid by electric utilities as well as interest on the unspent balances of those fees. At the end of 2007, the fund had a balance of just over \$20 billion. Under the Nuclear Waste Policy Act, amounts credited to the fund are available, subject to appropriation, to DOE for the construction and operation of the Yucca Mountain facility and other activities related to managing nuclear waste. In 2007, the Congress appropriated \$99 million from the fund to DOE; deposits from fees paid by utilities totaled about \$750 million.

3. Do you believe the Global Nuclear Energy Partnership (GNEP) can help reduce the liability costs incurred by the government by lessening the volume of waste being temporarily stored at commercial nuclear sites across the country?

Dr. Orszag recently testified on the potential for the reprocessing of spent nuclear fuel (a component of GNEP) to reduce the estimated cost of the nuclear waste disposal program (see enclosed testimony presented to the Senate Committee on Energy and Natural Resources on November 14, 2007). Although GNEP could reduce the volume of waste by reprocessing it, CBO found that the total cost of managing the fuel cycle would be more with reprocessing than it would be under the alter-

native where spent fuel is stored temporarily and then placed in a long-term repository.

I hope this information is helpful to you. If you have additional questions, please contact the CBO staff.

Sincerely,

KIM PAUL CAWLEY,

Chief, Natural and Physical Resources Cost Estimates Unit.

[Whereupon, at 11:12 a.m., the Committee was adjourned.]

