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THE ALLISON REPORT

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

TO

RECEIVE TESTIMONY ON THE "REPORT OF THE INDEPENDENT CONSULTANT'S REVIEW WITH RESPECT TO THE DEPARTMENT OF ENERGY LOAN AND LOAN GUARANTEE PORTFOLIO"

MARCH 13, 2012

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THE ALLISON REPORT

TUESDAY, MARCH 13, 2012

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 10:01 a.m., in room SD–366, Dirksen Senate Office Building, Hon. Jeff Bingaman, chairman, presiding.

OPENING STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO

The CHAIRMAN. OK. Why don't we get started? Today's hearing will provide us an independent snapshot on the loan programs within the Department of Energy that were created in the 2005 and 2007 energy bills. Mr. Allison has had considerable expertise, both within the government and in the private sector. He has produced a useful review of how the programs are being administered, including his suggestions on how administration can be improved. We appreciate his willingness to come here and share his findings with us.

As members of the committee know, the issues surrounding the United States ability to compete in the international race to develop and deploy clean energy technology has been a concern to many of us here on the committee for many years. The loan programs, in addition to ARPA–E and other efforts to support domestic deployment of next generation technologies passed in previous energy bills, are part of a concerted effort to ensure the U.S. does not fall behind in addressing the critical challenges of energy, economic, and climate security posed by our current reliance on fossil fuels, from both power generation and transportation.

These programs in particular recognize that it's not enough to have the innovative research that our national labs and universities conduct. There also needs to be a pathway to turning those ideas and inventions into profitable companies.

I believe it is important to keep this goal in mind as we look at these programs today. While these programs need to be administered with high standards of professionalism and integrity—I believe Mr. Allison's report indicates they are—it is also necessary to recognize that there is uncertainty about what technologies will eventually win the day. If we want to be sure that taxpayers lose no money, then it is easy enough to just eliminate government support for American efforts to compete in developing and deploying these new technologies.

Unfortunately, our efforts to support domestic players in this race through the Loan Guarantee program have been caught up with many election year issues. My impression is that overall the program is doing what it is designed to do; that is, to take on risks that private investors are not willing to take on, not that the private sector has not taken on risk. Every investment the government has made has followed large, risky investments by the private sector. Private markets are selecting the winners, at least the companies they believe will be winners, and the government is stepping in to help these entrepreneurs achieve the scale necessary to give them a chance to compete on the global stage.

Unfortunately, although the U.S. remains one of the greatest sources of innovation in the world today, it is not clear that we are going to reap the benefits of that innovation, or even retain the advantage we have in that innovation. In the ever-changing and highly competitive environment of high technology, the research and development necessarily follows the manufacturing, and before long, the next generation of technologies are being developed overseas, as well as the manufacturing occurring overseas. So, we have seen that scenario play out in such industries as televisions and consumer electronics. In my view, it would be tragic if it happened again in the technology areas that relate to our energy future.

I believe that is the important context for our conversation today. Both our witnesses today have important insights on how we can best achieve the goal of advancing clean energy in the United States in a way that gives the most value to the taxpayers. This will never be a risk-free enterprise. Very few things of lasting benefit are, but I look forward to their thoughts on how we can best balance those risks with potential benefits of fully developing these technologies here and at home.

Let me call on Senator Murkowski for her comments before we hear from our first witness.

STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. Thank you, Mr. Chairman, and I appreciate you scheduling what I think is a very important hearing. I think it is vital for our committee to be conducting regular and intensive oversight over the programs and the agencies that are under our jurisdiction, especially when we see problems that may be unexpected, or certainly serious problems begin to surface.

I understand Secretary Chu will join us later this morning. I think it will be helpful to him—to hear from him directly about what has gone in this area. Mr. Allison, to you, thank you not only for being here this morning, but thank you for agreeing to take on the audit of the Department's loan programs.

This is one of the more complicated topics that I think our committee will be tackling. These loan related authorities and the Energy Department's use of them span different Administrations, different Congresses, and include 3 separate programs, each with their own unique attributes.

I want to say that I found the independent audit to be quite useful. It disaggregates the projects based on risk profiles rather than programmatic origin. It discusses transparency and reporting

shortcomings, reveals the concentration risk in the current portfolio. The audit further highlights the portfolio's reliance on State and Federal mandates to force the creation of markets for certain project and products, and it makes some valuable recommendations that we and, I think, the Secretary need to consider.

If there is one shortcoming to the audit, it is that it does not delve deeply into the history of these programs, which I think is essential to understanding how we have gotten into some of the difficulties that we are now facing. Again, we are talking about 3 different programs here. You have got the first one that was section 1703 from the 2005 energy bill, you have from the 2007 energy bill, the ATVM, and then you have section 1705 from the 2009 stimulus. While there are certain similarities between the 3, there are some very important distinctions and differences between the 3 programs. I just will take a quick moment, Mr. Chairman, to review them.

Section 1703 was created by a Republican Congress, relied heavily upon credit subsidy costs being self-paid by the applicants, made any project using new or significantly improved technologies eligible. Unfortunately, it is not closed on a single loan guarantee. Then you have section 1705, which was created by a Democratic Congress, accompanied by $6 billion to pay for applicants' credit subsidy costs, narrowly limited eligibility to renewable and transmission projects. This program has closed on 27 loan guarantees worth approximately $16 billion.

Then you have the ATVM, designed to offer direct loans to auto makers, over $7 billion appropriated to cover credit subsidy costs, but just 5 loans have been issued. We have heard concerns raised around this table here about that. The last loan was in March 2011, and then the one prior to that was April 2010.

Many of the remaining applicants are withdrawing. They are expressing clear frustration over DOE's apparent inability to either make an up or down decision on this. More than half of ATVM's lending authority remains unused, and the program, as I understand it, is virtually dormant.

Both the 1705 and the ATVM programs are now dogged by questions about political influence, compliance with underlying statutes, and sometimes poor investment decisions. I think that everyone here is aware of that fact. Some may think that we have called for this hearing this morning to pile on, to add to those criticisms, but I do not want to take my time today to add to the narrative of the scandal and the controversy that the Department is already confronting. Instead I would just offer this. Hard questions need to be asked and to be responded in full.

These programs should be examined, and I think that they should be improved. That is an appropriate role for Congress and, more specifically, this committee. We did not expect every single project of the Department supported to be a roaring success, but we also did not expect to see an accumulation of failures so quickly. There are clearly problems that need to be sorted out and worked through.

Your audit, Mr. Allison, I think is a good first step, and I think that this hearing moves us in the right direction. DOE's loan programs can serve a valuable purpose. I have said that repeatedly.

But right now we need to know if the loans and the loan guarantees that have been issued through them are as effective as we had all hoped that they would be.

We will still have some tough decisions to make going forward, and I hope that we learn enough this morning to make sure that those decisions are fully informed.

I thank you, Mr. Allison, and I thank you, Mr. Chairman.

The CHAIRMAN. Thank you. Mr. Herb Allison is the author of the "Report of the Independent Consultant's Review with Respect to the Department of Energy Loan and Loan Guarantee Portfolio." We appreciate your good work on that report, and we look forward to your describing it to us and making any other comments you would like before we ask questions. Thank you.

STATEMENT OF HERBERT M. ALLISON, AUTHOR OF THE "REPORT OF THE INDEPENDENT CONSULTANT'S REVIEW WITH RESPECT TO THE DEPARTMENT OF ENERGY LOAN AND LOAN GUARANTEE PORTFOLIO"

Mr. ALLISON. Thank you, Chairman Bingaman, Ranking Member Murkowski, and members of the committee for asking me to testify today.

Last November, I was appointed by the chief of staff of the White House to study the Department of Energy's portfolio of loans and guarantees to clean energy projects. I was asked to perform 3 tasks: first, evaluate the current status of the portfolio, second, propose ways to strengthen management and oversight of the program, and, third, recommend a system to provide early warning of problems that might harm the portfolio's value.

The scope of my assignment did not include investigating past decisions and actions because several independent investigations are already under way. Given the tight 60-day deadline, my team and I relied on readily available information. The Department of Energy, or Department of Energy, rapidly provided documents and arranged interviews that we requested.

We conducted our review and developed our recommendations independently of the White House and the Department of Energy. We chose 2 methods for estimating future losses in the portfolio. The first method is the one that the DOE must use to comply with the Federal Credit Reform Act of 1990, or FCRA. Our second method, called fair market value, or FMV, is used in the capital markets to estimate the discount from a loan's face value that investors would demand so they could receive an acceptable return if they purchased the loan.

The FCRA and FMV methods have fundamentally different purposes so their outputs are not directly comparable. FCRA, the government method, estimates the credit loss on the loans. FMV, the market method, estimates a broader set of costs and provides information useful in managing the portfolio. But FMV does not estimate the cost to DOE if it holds the portfolio until the loans are paid off.

Using the FCRA method we estimated that the expected credit loss on the portfolio will be $2.7 billion, about 7 percent less than the DOE's recent estimate of $2.9 billion. Using the FMV method,

we calculate that investors purchasing the loans would demand a discount of $5 billion to $6.8 billion from face value.

Importantly, neither FCRA, nor FMV, nor any other financial model can reliably predict the eventual loss of the DOE portfolio, for several reasons. First, these loans will not mature for up to 30 years, well beyond the limits of forecasting. Second, most projects are still being built, and some rely on unproven technologies. Their performance will not be known for some years. Third, as projects prove themselves, their risks and expected losses will diminish. Fourth, the estimates of loss assume that al projects will be fully funded, and that DOE will be a passive bystander, unable to influence the portfolio's risk over time.

But so far, DOE has funded only a third of its total commitments. DOE's loan agreements allow it to stop further funding and demand more credit protection if projects do not meet targets. Some of the riskier projects have not received any funding, and others have been funded only partially. If those projects do not meet conditions in their loan agreements, DOE could cutoff more funding, and the forecasted loss could decline substantially.

For all these reasons, our focus should be less on these unreliable forecasts of losses and more on assuring effective management of the portfolio going forward. DOE must be an active manager, continuously monitoring their projects, spotting risk, and limiting taxpayers' exposure to loss.

The report recommends ways to strengthen management and independent oversight of the program and provide early warning of potential problems.

In brief, our recommendations include, first, assuring adequate funding and staffing of the program; second, protecting taxpayers by strengthening DOE's position as a creditor wherever possible, and having a clear policy on funding projects that are not meeting targets; third, determining whether to hold or sell the loans over time; fourth, strengthening internal oversight by forming a risk management department and combining several committees in DOE that now oversee the program; fifth, establishing a high level advisory board to consult with the Secretary of Energy on policy matters; sixth, creating an early warning system covering market conditions, performance of all projects and loans, and internal operation of the program; and last, improving public reporting about the program.

Thank you, and I will be pleased to answer your questions.

[The prepared statement of Mr. Allison follows:]

PREPARED STATEMENT OF HERBERT M. ALLISON, AUTHOR OF THE "REPORT OF THE INDEPENDENT CONSULTANT'S REVIEW WITH RESPECT TO THE DEPARTMENT OF ENERGY LOAN AND LOAN GUARANTEE PORTFOLIO"

Thank you, Chairman Bingaman, Ranking Member Murkowski and members of the Committee for asking me to testify today.

Last November the Chief of Staff of the White House, then William Daley, appointed me to conduct an independent study of the Department of Energy's ("DOE") portfolio of loans and guarantees to clean energy projects (hereinafter, "the Portfolio").

I was assigned three tasks:

1. evaluate the current status of the Portfolio;

2. recommend ways to strengthen management and oversight of the DOE's program for granting loans and guarantees to clean energy projects (hereinafter, "the Program"); and

3. propose an early warning system for spotting potential problems that could affect the value of the Portfolio.

I was asked to focus on the present and future of the Program, not to conduct an investigation into past decisions and actions. Several independent investigations were already underway.

The Chief of Staff requested that I complete the assignments within 60 days after retaining advisors. I selected Arnold & Porter LLP as legal advisor, Greenhill LLC as financial advisor, and David M. Johnson, an experienced financial executive, as project advisor.

Given the tight timeline for the project, my team and I had to rely on readily available information. DOE rapidly provided documents and arranged interviews with current and former DOE officials that we requested. We also interviewed selected officials of the Office of Management and Budget and the Department of the Treasury. We evaluated 30 individual transactions with aggregate loan and guarantee commitments of $23.77 billion.

We conducted our review and developed our recommendations independently of the White House and DOE. I decided on the methods of valuation and the conclusions about the current status of the Portfolio, the recommendations for strengthening management and oversight of the Program, and the proposed early warning system. We did not include the Solyndra and Beacon loans in our review, as those loans are no longer in the Portfolio.

We used two quantitative methods to assess the loans in the Portfolio.

The first is the method that the DOE must use to comply with the Federal Credit Reform Act of 1990 ("FCRA"). It calculates the "Credit Subsidy Cost" that is the amount needed to cover expected shortfalls in payments from each loan. The Credit Subsidy Cost reflects DOE's assessment of that loan's credit quality.

The FCRA method is appropriate for budgeting the government's wide range of loan programs because errors in estimating losses in the various programs tend to offset each other over time.

We also evaluated the Portfolio by the Fair Market Value method, or "FMV." It is used in the capital markets to estimate the discount from a loan's face value that investors would demand so they could receive an acceptable return if they were to purchase the loan.

The FCRA and FMV methods have fundamentally different purposes, so their outputs are not directly comparable.

- FCRA estimates the government's expected loss on the loans.
- FMV estimates the discount that investors would require to purchase the loans.

The FMV discount reflects not only credit risks but also market risks and transactions costs that will not affect the government if it holds the Portfolio until the loans are paid off.

We used the FMV method in addition to the FCRA method because FMV provides additional insight into the future marketability of these loans and guarantees, into the financial incentives that sponsors and other parties have to invest in these projects, and into ways that DOE should manage the Programs to protect and enhance value to taxpayers over time.

Using the FCRA method, we estimated that the expected credit loss on the Portfolio will be $2.7 billion, about seven percent less than DOE's own recent re-estimate, which is $2.9 billion. Using the FMV method, we estimated that investors would demand a discount of $5.0 billion to $6.8 billion from the face value of the loans if they were to purchase the Portfolio. All estimates of expected credit losses and discounts presented in my testimony are as of January 31, 2012, the date of my Report.

To facilitate our analyses, we grouped the loans and guarantees into three categories, each with distinctive credit characteristics. The categories are:

1. "Utility-Linked Loans" to projects where an investmentgrade public utility has agreed to purchase the output of the project for most or all of its useful life. These 20 commitments total $14.4 billion. Because the loans will be supported by power-purchase agreements once the projects are operational, we consider their risk to be moderate.

2. "Non-Utility-Linked Loans" to cellulosic ethanol projects, solar manufacturing companies, and small, start-up automotive manufacturing companies. These commitments to eight projects total $2.01 billion and exclude Solyndra and Beacon Power. On average, these loans are smaller than the Utility-Linked

Loans and entail greater risk because the projects do not have guaranteed outlets for their production.

3. Loans to Ford and Nissan, which we view as investmentgrade credits. These loans total $7.355 billion, are secured, and have terms typical of corporate loans.

The credit ratings we assigned to the Utility-Linked Loans were modestly lower than those assigned by DOE. Therefore, our estimate of the Credit Subsidy Costs for Utility-Linked Loans using the FCRA method is nine percent higher than DOE's reestimate as of December 11, 2011 ($1.696 billion vs. $1.551 billion).

Using the fair market value method to evaluate the Utility-Linked Loans, we estimate that investors would require an aggregate discount of $3.5 billion to $5.0 billion to the face value of those loans if they were to purchase them.

In evaluating the Non-Utility-Linked Loans, we assigned lower average credit ratings than did DOE. We estimate the Credit Subsidy Cost for these loans to be $820 million, 28 percent higher than DOE's FCRA re-estimate of $640 million.

Our fair market value analysis yielded an estimated discount of $707 million to $858 million from the face value of the Non-Utility-Linked loans.

The Ford and Nissan loans represent a commitment of $7.4 billion. We assigned a credit rating to the Ford loans that is four notches higher than DOE's rating at re-estimation, but we agreed with DOE's re-estimate of the Nissan rating.

Our estimate of the Credit Subsidy Cost of the Ford and Nissan loans totals $166 million, 78 percent less than DOE's FCRA reestimate of credit loss, which is $753 million as of December 11, 2011.

We calculated the fair market value discount from the face value of the Ford and Nissan loans to be $716 million to $1.021 billion.

It is important to emphasize that neither FCRA nor FMV nor any other financial model can reliably predict the amount of eventual loss on the DOE Portfolio.

The actual loss will depend upon the outcomes of many factors:

- First, the Program's loans have long maturities—up to 30 years, well beyond the limits of forecasting.
- Second, most projects are in early development and some are deploying unproven technologies, so their future performance is hard to predict.
- Third, once some projects are completed, their prospects will be clearer, so their risks and estimated losses will diminish in some instances. In other instances, possible changes in factors such as regulations and markets could increase expected losses.
- Fourth, the FCRA and FMV methods assume that all of the projects will be fully funded and the DOE will be a passive bystander unable to influence the Portfolio's risk over time. However, DOE has funded only about a third of its total commitments. Some of the riskier projects have not received any DOE funding and others have been funded only partially.

DOE has negotiated protections in the loan agreements that enable it to cut off further funding and to demand more credit protection if projects do not meet targets. If DOE denies further funding to such projects, the risks and expected losses will decline.

For all of those reasons, focusing on forecasts of losses is far less productive than is assuring that DOE will effectively manage the Portfolio going forward.

DOE must be an active manager, continuously monitoring the projects, spotting risks, exercising its rights in the loan agreements, and limiting taxpayers' exposure to loss.

The Report contains numerous recommendations for strengthening management and oversight of the Program and providing early warning of potential problems.

Our recommendations regarding management of the Program include:

- Assuring adequate funding and staffing for management and oversight of the Portfolio for the long-term. That funding will be small compared to the risk of higher losses if the Portfolio is not actively managed.
- Clarifying the authority and accountability of managers along the chain of command.
- Establishing clear goals for the Program, to include defining the vague financial goal in the enabling law for all of the loans except the automobile loans, which is to assure a "reasonable prospect of repayment."
- Engaging in long-range strategic planning for the Program, including determining whether to hold or sell loans over time, and whether to outsource management of the Program;

- Protecting taxpayers by strengthening DOE's position as a creditor wherever possible and having well-defined policies for cutting off funds if projects are not meeting targets.

The laws establishing the Program contain few requirements for oversight and reporting. While the DOE has developed policies and activities in those areas, we recommend several improvements:

- Strengthen internal oversight of the Program by forming a Risk Management department separate from the office administering the Program and by consolidating various risk committees in the DOE that oversee the Program;
- Establish an interagency Advisory Board composed of senior officials from other agencies and experts from the private sector to review the Program's governance and advise the Secretary of Energy on policy matters concerning the Program;
- Create a comprehensive early warning system covering market conditions affecting the Program, regulatory changes, performance of every project, loan, and involved party, and internal operation of the Program; and, lastly,
- Improve public reporting about the Program by enhancing its content and increasing its frequency.

Thank you. I will be pleased to answer your questions.

The CHAIRMAN. Thank you very much.

Maybe I could ask you to elaborate some. Your report indicates that changes were made in the program to better control risk, both before the program review or the review period, and also during the time that you were doing your review. I guess I would be interested in any comments you could give us on the effect that these either personnel or policy changes have made, and whether you think those mid-course corrections have been useful or adequate.

Mr. ALLISON. Thank you, Chairman Bingaman.

First of all, in terms of structuring the loans, there have been improvements to the structure of the loans. Beginning in the middle of 2010, the Department's loan agreement provided for more staging of funding, and also provided that the sponsors of these projects should fund the initial stage with equity before the Department of Energy would be providing loan funds. So, the Department would have the opportunity to view progress on these projects before the government starts putting its own money to work.

We think that the terms and conditions of these loans, by and large, since the middle of 2010, in most cases conform closely to commercial practice in the industry.

In terms of the internal management, there has been a gradual evolution of the management and oversight of this program within the Department of Energy. We see that, for instance, several committees have been formed to oversee and make recommendations to the Secretary about committing additional loan funds. However, in our view, there still is room for improvement, and that is why we have made these recommendations, first of all, to fully staff the loan project office with permanent professionals. There is a need for more expertise in, for instance, project finance.

Many of the positions are currently financed by consultants who are temporary employees. We believe that going forward there needs to be consolidated internal oversight and, very importantly, the formation of a risk management department. Currently the loan project office executive director oversees the credit department, for example, the compliance department. We believe those should be separated out, and there ought to be an independent view within the Department of Energy about the risk that is being

undertaken as loan are provided, and also about the ongoing dynamic changes in risk within these loans.

An independent oversight would be another check and balance. We think that that position should have the ability to call for a halt in a funding until the Secretary approves if there is a different opinion between the risk management department and the loan project office as to whether that loan should go forward.

The CHAIRMAN. As I think you are aware, Senator Murkowski and I and some others here on the committee have proposed a bill called a Clean Energy Deployment Administration to establish an independent agency outside the Department of Energy that would take over responsibility for administering loans. Have you had a chance to look at that? Do you think that the general thrust of that legislation would make sense as an alternative to continued housing of this activity in the Department of Energy?

Mr. ALLISON. Chairman Bingaman, I have reviewed the legislation. I think that all can agree that there is a need for professional oversight and the use of best practices in managing and overseeing this portfolio.

I think that there are several questions that I might pose. These are more in relation to policy. Again, my brief here was to do a fact-based analysis.

But in answer to your question, I think that one issue is, if there is an independent agency within the Department of Energy, who is responsible for policy implementation of this program? Is it the new CEDA agency, or is it the Secretary? My understanding is that this agency would be completely independent from a decision-making standpoint from the Secretary. So, one, I think the law should provide who is really accountable.

Second, should there be a sunset provision in this bill? The purpose of these clean energy loans is to provide funding for projects until they reach commercial maturity and funding is available in ample amounts in the public markets. Unlike many other loan programs administered by the government, which have really indefinite futures, like student loans, or FHA, and so forth, this intended, I believe, to be a program that would run only a certain number of years. So, perhaps there needs to be some type of sunset provision.

The CHAIRMAN. Do you have anything else to add? Go ahead if you do.

Mr. ALLISON. I think, too, as I read the bill, it would allow this agency to be able to borrow to fund its operations. This could mean that this agency would have not only equity—perhaps $10 billion—but indefinite funding capability. Is there a possibility that it might start to grow in size and begin to crowd out private sector financing? That is one potential risk. Could it become an independent force in and of itself?

So, I think that these types of issues need to be carefully looked at before the decision would be made to go ahead.

The CHAIRMAN. Thank you very much.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman.

Mr. Allison, when we created the Loan Guarantee program, there were a number of terms and conditions that were inserted at im-

plementation, and I want to ask you 3 questions, I hope pretty brief.

But one condition in the program is that there be a "reasonable prospect of repayment." In your opinion, what is a reasonable prospect of repayment? Is it an 80 percent chance that it is going to be repaid, a 70 percent? Is it higher, is it lower? What is reasonable?

Mr. ALLISON. Senator, that is an excellent question, and we actually looked at the history of that term in legislation, and it goes back quite a long way. But nowhere could we find a definition of reasonable prospect of repayment.

Senator MURKOWSKI. So, how would you define it?

Mr. ALLISON. If it were—I think that is precisely the issue, how does one define it? I would say "reasonable prospect" would probably mean more than a 50 percent probability, but others might define it as a 90 percent probability. With that amount of vagueness, there is room for a great deal of controversy and second guessing——

Senator MURKOWSKI. Yes.

Mr. ALLISON [continuing]. About this program. So, I would respectfully recommend that there be greater clarity to these policy goal regarding financial recovery.

Senator MURKOWSKI. Then, let me ask you another one where I think we ran into a situation where there was some vagueness. Another requirement was that the obligation is not subordinate to other financing.

Mr. ALLISON. Yes.

Senator MURKOWSKI. I read that and it is, like, OK, there is no subordination there. But apparently there was some vagueness there. Do you think that in that situation this particular condition of the authorizing statute was vague in any way?

Mr. ALLISON. Yes. Not being an attorney, let me say in reading it, I think that it is quite clear to me that at the point of origination, there should not be subordination. The question is, later on if a project runs into trouble or a loan runs into trouble, DOE's the law allow that in order to preserve taxpayer assets, the DOE have the ability to subordinate?

In commercial practice, it is common that where a loan gets in trouble, in order to attract additional financing so the project can succeed, the existing lenders subordinate. They have a better chance of recovery.

If the objective is recovery for taxpayers, I would respectfully submit that there are a couple of techniques widely used in the private sector that are missing that are not available, or at least are in doubt, to the DOE. One is to be able to subordinate because at least you will get something back on the investment perhaps. The second is to be able to contribute equity or to convert to equity. In this case, it looks like that is ruled out.

I think that if I can speak more broadly about this, there is—these laws confine the type of financing that the government can make quite a bit. There is virtually no upside for taxpayers if these projects succeed. They are strictly debt. There is one case, Tesla, where the government did take options. Apparently the govern-

ment can take equity interest as a condition for making a loan, but it cannot make an outright equity contribution.

I think for early stages of investments, it might be suitable in some cases for the government to contribute equity, to prevent a control issue from arising where the government controls a project. It might be non-voting. It might be convertible preferred or something like that. So, one broad observation would be going forward, with legislation like this, there might be a wider variety of options. There might be more consideration to recovery and gains for taxpayers.

If a few projects were to pay off a lot, that might help to pay for any losses in the portfolio in other projects.

Senator MURKOWSKI. Let me ask you one more then, and this is a requirement to "provide an amount sufficient to carry out the project." Got to be pretty difficult to determine the overall cost of a project and whether or not available funds then will be there or sufficient to cover the amount before we have issued this loan guarantee.

Mr. ALLISON. Right.

Senator MURKOWSKI. How do we finesse that one?

Mr. ALLISON. Yes. Most of the cost is going to take place during the construction phase until this project is up and running and begins to generate revenues. In that phase, the loan agreements provide that there must be very detailed budgets. There must be independent engineering analyses and then reports as progress goes along. As I mentioned before, there is phase funding, so certain benchmarks and milestones must be met before funds are advanced by the Federal Government.

Senator MURKOWSKI. Is that happening, though?

Mr. ALLISON. Yes. So, it is easier to estimate the cost. There still may be overruns, and most of these loans provide for some cushion in case of overruns. That is built in. There is, to our understanding, frequent reviews of progress in all of these projects.

What is the unknowable is once these projects are operating, especially those without a power purchase agreement, which is pretty much a guaranteed source of revenue for the entire project, the capacity going forward, in the case of the manufacturing ventures, they have no power purchase agreement. They have to sell into the market. How well they will succeed in a dynamic, highly competitive market, for instance, for electric cars, that is open to question.

That is why we divided up the portfolio the way we did into utility power purchase agreement type financings to the non-utility loans, including manufacturing of electrical components or cars, for example. Then Ford and Nissan, which is a large component of the whole portfolio, those are investment grade credits, so we treated them differently. Those are easier to analyze.

So, the real risk, much of the risk, I would say, in the portfolio is in these non-utility manufacturing companies.

The CHAIRMAN. Senator Stabenow.

Senator STABENOW. Thank you, Mr. Chairman and Mr. Allison. Thank you very much for your analysis. It is very helpful to us.

As someone who was deeply involved in authoring the advanced technology vehicle manufacturing program or section 136, working with our chairman, at the time when we put that into the energy

bill, there were a number of things that were happening in terms of the credit markets. But also we were in the legislation, the energy bill, in 2007, we were raising the fuel efficiency standards and encouraging more smaller, fuel efficient vehicles. I was extremely concerned at the time that that production would go overseas if we did not, in some way, support retooling our plan. So, that how is we came up with this particular program.

In fact, it has done what we wanted it to do, at least at the beginning. I mean, it is stuck at the moment here. But when we look at Ford Motor Company retooling their Michigan assembly in Wayne, Michigan, saving 1,900 jobs. They are actually bringing jobs back from Mexico now related to that operation, as are a number of other operations.

So, first I would just, as a statement, Mr. Chairman, when we look at the global economy where Germany, China, India, Japan, every other country wants to do manufacturing, advanced manufacturing, so that they have good middle class jobs, they are all providing support in some way for financing, tax incentives, and so on. At least as it relates to the ATVM Program, that is very much what the goal of that is, is to make sure that we are providing that support to keep jobs here in America.

What would you recommend to make this retooling program more effective at this point?

Mr. ALLISON. First of all, I would point out that these programs are intended to encourage risk taking. That is the whole point really. So, having risk in the portfolio is understandable.

I think what is important going forward is to make sure that this portfolio is well managed by professionals, that there is independent risk oversight of this portfolio, that there is ample public reporting on each of these projects and how they are doing so that the public and the Congress is kept well-informed.

While these programs are being managed, again, there is some room for improvement, and I think that with the recommendations that we are putting forth, if those are adopted, I think that this portfolio can be very responsibly managed going forward.

Senator STABENOW. Speaking more about the risk, because I know there is a concern and there has been criticism related to the amount of risk that the Department has taken on the loans and loan guarantees. But I found it interesting that your report suggests that some of the risks associated with loans has actually gone down, and particularly again with the retooling, the manufacturing retooling loans. In particular, you calculated the risk associated with the Ford retooling loan and Nissan had decreased by 95 percent.

Mr. ALLISON. That's right.

Senator STABENOW. Now I would suggest it is, in part, because companies like Ford are making fuel efficient vehicles. People are buying. Consumers are buying. It is doing well. It has been a real success story.

But I wonder if you could talk a little bit more about other reasons for changes in risk assessment that you saw in your report.

Mr. ALLISON. First of all, some of these projects have progressed, and, you know, Ford is the best example. During the height of the crisis, all the automobile companies, even including Ford, which,

you know, did not need a bailout, they were also suffering during that time. Ford has staged a remarkable recovery, and that is why the debt that the government now holds from Ford is rated investment grade. It is triple B today. That has had a major effect on the overall risk composition of this portfolio.

So, I think that as projects, as I mentioned in my testimony, as they progress, as long as they are progressing according to plan, the risk in that project declines. The major component of risk in many of these projects is during the construction phase, especially for the utility related projects because once they are completed, they will have a binding long-term contract with an investment grade utility to purchase all of their production.

So, I think that, again, in several years, the tenor of risk in this portfolio should be demonstrably improved, if all goes according to plan.

Senator STABENOW. Thank you very much.

The CHAIRMAN. Senator Coats.

Senator COATS. Thank you, Mr. Chairman.

Mr. Allison, I want to thank you for your work. I think it was very important to have someone take an independent look at the situation.

I guess my question goes back to the more fundamental question of what the role of government should be in something like this. We have some celebrated failures, and it sours the public in terms of the use of taxpayer money when they read about these failures. We are talking about estimates of several billions of dollars of taxpayer money that——

I guess my question goes to, what is your take on the question of the government limiting its investments into basic research, and letting the private market take more of the risk in terms of the commercialization of various products and new innovations? Have we learned some lessons from our efforts to direct money to specific industries and specific companies?

You know, there is always the question of whether there is political influence in the decisionmaking process. I mean, there are some of these allegations—I am not going to go into them—but allegations that on some of these loans there were directions from policymakers at the White House or political directives coming down in terms of certain industries and so forth and so on.

Are we just—and now we are talking about better management of the process, but is the basic process broken to start—have a fatal flaw to start with?

Mr. ALLISON. No.

Senator COATS. Could you just give me your thoughts on that?

Mr. ALLISON. Senator, thanks for the question. That is a very important question. I am a big believer in the capital markets, having spent most of my years of my professional career in the capital markets. I think that if we look back in history here, and I am sure you are well aware of this, in the energy field and many other fields, like medicine, et cetera, transportation, the Federal Government has played an important role in getting projects off the ground to the point where they could stand on their own. If you look at the space program now, we are starting to see commercial launch commercials coming into effect and into operation. But the

government had to fund the initial stage, and the same with most forms of energy. Nuclear energy is a great example as well.

I think—so where there is a policy need, and this is where, of course, the Senate and the House of Representatives have to make the decisions, there may well be a legitimate role for government financing. I think, however, that financing needs to be tailored to the policy goal and to the risk characteristics of these projects, and to, where possible, provide mechanisms for taxpayers to benefit if projects are successful with Federal money.

I do think that there is the so-called valley of death in various phases of financing for, say, clean energy, where the government can play a constructive role. These projects need to be carefully researched, and they need to have financing structures that protect taxpayers. There ought to be a finite life, as I mentioned earlier, to these types of programs, which are intended for a specific purpose, for a certain period of time, until these industries mature.

Senator COATS. I think your recommendations—I mean, should we go forward on the basis of what you have just said, would be helpful in that regard. But it concerns me when I read that, you know, the inability to attract the necessary people with necessary skills and experience in order to work in the public sector, to make these types of evaluations, particularly when they are using someone else's money. When you are making these evaluations in the private sector, the bottom line is what ultimately counts, and so, therefore, I think this naturally would get a much keener and sharper look and due diligence before you commit the funds.

Second, it is outside the political process. I am—you know, there is responsibility here that falls on both sides for some of these programs in terms of we continue to read about the political influence directing things the wrong way. For instance, stepping out of this field into another, I can remember talking to the head of NIH, and he said, you know, if Congress would not direct how we do our—how we allocate our money, we could be making breakthroughs in life threatening illnesses that are very, very close. But Congress keeps telling us, no, you got to put the money somewhere else.

I am afraid part of the beast here that exists from a political standpoint in terms of our thinking that we have, you know, or responding to constituent requests or whatever, that we have a better ability to direct where the funds go than the private sector does. That's where, I think, we get in trouble.

My time has expired. I just did not really come to preach. But you do come out of the private sector, and I think your evaluation of this is important for us to hear.

Mr. ALLISON. Yes. Senator, may I just respond.

The CHAIRMAN. Go right ahead.

Mr. ALLISON. On your final points, Senator, that is why I think it is important that these programs be reviewed periodically to see whether they are still relevant and ideal for the current climate and the objectives that are being sought.

I think in terms of making sure that there is professional staffing, as we pointed out, there is no provision for long-term funding of the loan project office. I think one of the reasons why it is difficult to attract and retain professional talent is that people do not see that if they come into the government in one of these roles,

that this program will be funded down the road. It is funded now out of origination fees. So, as loans are closed, funding comes into the Department of Energy that underpins this loan project office. But once the origination stops, that funding dwindles.

This program has loans that are going to be out there for 20 to 30 years. It is going to need active, professional management for the entire time that the government holds these loans, because decisions will have to be made all along the way.

So, to attract people, I think they need to have assurance that the funding will be there. Otherwise, why should they join up and oversee this program?

Senator COATS. If I could just have 10 seconds, but wouldn't that go against the whole concept of sunset programs 30 or 40 years out?

Mr. ALLISON. Yes.

Senator COATS. But assuming that you are talking about sunset in the amount of commitment, does not that run counter——

Mr. ALLISON. Once——

Senator COATS [continuing]. The other?

Mr. ALLISON. What I am talking about, Senator, is that if you have an ongoing program where you are going to making loans over time, then I think you need to think about having a sunset provision. When do we stop making new loans? When is the private market able to finance these types of projects without government assistance?

But once long-term loans like these are made, they are going to have to be administered. Now, as we point out, one consideration should be, should the DOE sell off these loans? Once they are matured and there is a public market for them, should they sell them off, or should they hold them? But we presume that they are going to hold them for many years. If they are going to hold them for many years, there is going to have to be professional oversight to make sure that the taxpayers are being protected.

The CHAIRMAN. Senator Wyden.

Senator WYDEN. Thank you, Mr. Chairman, and, Mr. Allison, thank you for your good work.

It seems to me that as you drill into this and look at the various kinds of loans, you come to the conclusion that not all energy loan guarantees are created equal. You then compare that to the statute, the loan guarantee statute, which basically lumps everything together, and you say to yourself, that sure looks like it is right at the heart of what the Congress ought to be trying to do. You have made a number of constructive, you know, comments today that track with my thinking.

I mean, if there is private sector investment, for example, that signals a message that people can feel more confident that this is something that can work. Utility linked loans, for example, which the Pacific Northwest, as you know, has been very interested in, a utility linked loan ensures that you already have a customer lined up. You have got a customer lined up from the get go, which also should give a measure of confidence.

I think my question to you is a result of sort of starting with this proposition that not all energy loan guarantees are created equal. My question would be to you, would it make sense for the Congress

to really step back now and look at restructuring the loan guarantee statute to, in effect, set up different categories that recognize fundamentally different risk to the taxpayers? You would measure, for example, something that would ensure that there was a market from the get go. That could be one category. Something else which was exciting and promising, but didn't have the same level of support could be a different, you know, category.

My question to you is, would it make sense to restructure the loan guarantee statute along the lines of recognizing different risks to taxpayers?

Mr. ALLISON. Senator Wyden, I think that is an excellent thought. I think that you do have a wide variety of loans in this program. I think there needs to be great clarity about the purposes of the programs as a whole and what they are designed to achieve.

Again, as I said before, I do not think there is anything wrong with making some loans that are admittedly risky as long as we are acknowledging at the time the risk in the loans. I think one of the causes of controversy about this program is that there are differing expectations about what this is supposed to be doing. I think your question hits on that.

You could have some programs, like the utility linked loans, where the risks are much better understood, where you have much less risk once these projects are built. There are certain risk characteristics. That is why we divided up the portfolio that way. There may be very good reasons to be supporting early stage innovative manufacturing companies in green energy to get those industries off the ground. That is going to involve higher risk. That ought to be acknowledged. There should probably be different types of financing available so that, again, greater risk, there are ought to be prospects for greater reward for taxpayers.

The way this program is structured today is kind of one size fits all. These are loans at government rates. I am not sure that in all cases they need to be at such a low interest rate to attract funding. The fees that the DOE can charge are very low. There is no provision for upside in terms of some type of an equity linked gain. So, maybe there is a different type or package of financing that should be available for riskier projects than for, say, the utility projects where there is a pretty conventional approach to debt structuring.

Senator WYDEN. I thank you, and I thought Senator Murkowski also made a lot of sense when she was saying right from the get go, nobody goes into this thinking that everything is going to be 100 percent, you know, winner in a dramatic opportunity for creating scores of new jobs and the like.

But taxpayers deserve better, it seems to me, than a program that lumps Solyndra, in effect, in the same category as one of these utility linked projects that has the customer, you know, up front. I think this is another area—Mr. Allison, I appreciate your answer—where we can do better for taxpayers in this country, do better for some of the most exciting and promising technologies. I see Senator Sanders here. He has talked a lot about the opportunities in renewable energy. I think we have got a chance to make some exciting changes in this country if we restructure this program.

Mr. Chairman, I thank you for holding the hearing.

The CHAIRMAN. Senator Barrasso.

Senator BARRASSO. Thank you very much, Mr. Chairman. I agree with my colleague, Senator Wyden, that taxpayers do deserve better. I appreciate your work on this.

The report had a section called "Proactively Protecting the Taxpayers' Interests." The report says that DOE should aggressively strengthen its positions as lender or guarantor in cases where borrowers seek relief from requirements in the loan repayments. Senator Murkowski addressed that.

You know, with regard to the situation with Solyndra, the Secretary has argued that the Department of Energy did not violate the 2005 Energy Policy Act when restructuring Solyndra's loan, which they restructured. It worked in a way that I thought put the American taxpayers at a disadvantage, that they were subordinated to other financing.

So, you know, I understand the Secretary saying that the law applies to origination of loans, not to the restructuring of loans. I do not agree with that interpretation. I think that the policy—Energy Policy Act of 2005 does not distinguish between origination of loans and restructuring of loans.

So, with that said, would you support legislation to ensure that American taxpayers will always be paid before private investors, whether it is an origination of a loan or a restructuring of a loan?

Mr. ALLISON. Senator, thank you for your question. I think if the paramount issue is recovery for taxpayers once these loans are made for policy purposes, based on my experience in the commercial world, I think that the, in this case, the Department of Energy, should have some flexibility to subordinate because that may be the best way, once the loan has been issued on a singular basis, to recover some money for taxpayers, because by subordinating, it may make it possible to attract additional funding from other debt investors, which can help that project succeed.

Sometimes these projects are going to run into trouble. They are, after all, risky. But that does not mean everything has to be lost. There needs to be creative refinancing for projects as a way to protect taxpayers and actually enhance the probability that they will get some of their money back.

Senator BARRASSO. It seems to me that subordination in the case specifically of Solyndra did not work——

Mr. ALLISON. Yes.

Senator BARRASSO [continuing]. To accomplish that goal. Thank you.

I want to ask you about bonus payments, to follow up on what you have said about taxpayers and getting value for their money. Several Department of Energy loan and grant recipients have recently filed for bankruptcy. They have laid off workers. They have experienced financial difficulties. The media has reported that several of these companies, including Solyndra, awarded large bonuses to executives and other employees, specifically the bonuses to executives as other employees were being laid off.

Last week it was reported that Beacon Powers' bonuses were specifically linked to executives' progress in landing the company's $43 million loan guarantee.

So, what, if any, protections are in place to ensure that American taxpayers do not foot a bill for bonuses awarded at failing companies.

Mr. ALLISON. Thank you, Senator.

First of all, let me, again, emphasize that we did not look at Solyndra and Beacon. We have not looked at the companies that received grants. We are only looking at the loan program.

I think that it is important—and the provisions in this law allow for this, and the Department can certainly have policies on this—should be looking at all the expenses planned in these programs. They may want to build in the capability to review, for instance, compensation programs. I am not sure that that provision is in these loan agreements, by the way, but that is something that might be considered because I can certainly understand the public consternation if people are receiving bonuses while a company is veering toward bankruptcy.

Senator BARRASSO. So, that would be one of your recommendations in terms of ensuring that abuses like this do not take place again.

Mr. ALLISON. I think that is a reasonable idea, yes, sir.

Senator BARRASSO. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Sanders.

Senator SANDERS. Thank you, Mr. Chairman. Mr. Allison, thank you for being with us.

In terms of full disclosure, let me just be very clear that I happen to believe that global warming is very real. I think it is causing enormous problems to our planet today, and I think it is totally irresponsible that we are not moving as aggressively as possible to reduce greenhouse gas emissions.

I would mention to my colleagues that a few weeks ago Senator Whitehouse and I had a press event with representatives of the insurance industry, not generally noted as one of the more radical groups in our society. They pointed out the enormous damages that extreme weather disturbances are doing to their bottom line because of global warming.

So, it is my view that our country and the Federal Government should be investing very, very strongly in energy efficiency and sustainable energy in order to reverse greenhouse gas emissions and try to protect the planet.

Now, in a sense, what we are talking about today is the role of government in energy, and we have been focusing on Solyndra and the 1705 program. But let me ask you a question, which I hope you have some familiarity with. Back in the 1960s and 1970s, there was a huge overbuild in terms of nuclear projects. In fact, as I understand it, about 100 nuclear facilities were terminated at huge expense both to rate payers and taxpayers.

Right now, I find it a bit ironic that some of my friends talk about picking winners and losers. But would you not agree with me that for the last 50 or so years, the U.S. Government has picked as one of its winners a very, very risky industry called nuclear power, an industry which, and please correct me if you disagree with me, would not be in existence today without the very, very strong support of the Federal Government in terms of the Price-An-

derson insurance program and, furthermore, in terms of the attempt at least to get rid of nuclear waste. So, would nuclear industry not be in the existence today if they were solely dependent upon Wall Street and the financial community to support them?

Mr. ALLISON. Senator, I would like to respond to your question, but I must confess I do not have real expertise on that question. I think that is a very broad, deep question as to whether the government should have been sponsoring nuclear energy.

I do believe as a general comment that in any nascent industry, and right now you could look at nuclear fusion, which could be the answer to a lot of our energy needs and could be a very clean source of energy. It may take——

Senator SANDERS. Mr. Allison, I am sorry to interrupt you. I have a limited amount of time.

Mr. ALLISON. Go ahead.

Senator SANDERS. When people talk about winners and losers——

Mr. ALLISON. Yes.

Senator SANDERS [continuing]. Is it fair to say that for the last 50 years, the U.S. Government has decided that one of the winners in which we should make huge investments is the very, very risky nuclear power industry?

Mr. ALLISON. The only comment I would make is that early—and this is from my own experience, so I comment on this. In early phases of any industry, it is very difficult to pick winners and losers. Therefore, often you find financing for a lot of different approaches to solving a particular problem, and over time, one learns a lot.

Senator SANDERS. Right. I agree. I agree with that. The only point that I am making——

Mr. ALLISON. Yes.

Senator SANDERS [continuing]. Is then when some people talk about the riskiness of certain types of sustainable energy or the problems with Solyndra, is it fair to say that we have seen that maybe 10 times plus in terms of the nuclear industry, which has at certain times already lost huge amounts of money from the taxpayers of this country? Is that a fair statement?

Mr. ALLISON. I would respectfully answer. I think that your next witness, Secretary Chu, is a far more qualified expert on that question than I am.

Senator SANDERS. All right. Thank you very much, Mr. Allison. All that I would say, Mr. Chairman, is, yes, we do pick winners and losers, and probably the great winner in terms of Federal subsidies is not only the nuclear industry, but the fossil fuel industry as well. We have pumped billions and billions of dollars into those industries. I, for one, think it is time to begin focusing on energy efficiency and sustainable energy.

Thank you, Mr. Chairman. Thank you, Mr. Allison.

The CHAIRMAN. Thank you. Senator Lee.

Senator LEE. Thank you, Mr. Chairman. Thank you, Mr. Allison, for being here.

I certainly agree that an audit of this program is warranted wholeheartedly. The real question for me is whether the government should even be playing venture capitalists with taxpayer

money in the first place, whether in this specific sector at the energy industry or elsewhere.

I want to make clear that my concerns over the administration of the Loan Guarantee program should not be mistaken for tacit approval of the program as a whole. When companies like Solyndra and Beacon Power fail, millions of taxpayer dollars are wasted, and it is clear that the government, in my opinion, truly has no business being in the investment business.

The apparent basis for the program as I understand it is that there are just certain types of investments that are so inherently risky that only the government can invest in them, only the government will invest in them. Today you seem, if I am understanding what you are saying correctly, to be somewhat downplaying the risk of these investments.

It is seems a little bit contradictory to say that, on the one hand, government intervention is absolutely necessary because only the government can do this, and that it is too high for private equity markets, and then also to claim that it is an appropriate risk of taxpayer funds because there are adequate safeguards in place. So, which is it? Is it too risky, or is it—or are the risks manageable?

Mr. ALLISON. Senator, thank you for your question. I think that these are policy questions that Congress needs to grapple with and answer. I am not sure that there—you can give a blanket answer to your question. I think, and you know this far better than I, but the Congress has constantly deliberating about what is in the national interest and the public interest over the long run, the payoffs such from some initiative to the public. They may not be direct financial returns, but they may be social consequences, whatever, that make it worth the government's while to be involved.

I think that there are numerous areas where private financing—and I am talking about health initiatives, for example, and that is why we have NIH doing research, and that is why we fund research in universities in physics and lots of other areas. So, there may be a legitimate role for government where private financing is not available.

I do believe, as I mentioned earlier, that these programs should be constantly reviewed, to the extent that there are programs in place, to see whether they are still necessary. Do they still meet that policy need, or are there private alternatives available today?

I believe that ultimately the best allocation of resources will take place through private interactive markets.

Senator LEE. Part of that inquiry then now to involve, is the risk manageable? If it is manageable, could it not under circumstances be manageable from a private capital standpoint, right?

Mr. ALLISON. That is a very legitimate question.

Senator LEE. If it is not manageable risk, then perhaps we should not be putting taxpayer dollars at risk.

So, your report did not consider either Solyndra or Beacon Power, and that is because, as I understand it, that is no longer part of the program. Those are finished.

Mr. ALLISON. Senator, yeah. They were no longer really part of the portfolio because they were in bankruptcy and their eventual value would be determined in the courts and through recovery.

Senator LEE. Do you have any way of guessing how that might have affected your report, what your report might have looked, how it might have been different had those still been on the books, had those not gone through bankruptcy at the time you conducted this report?

Mr. ALLISON. I would only be speculating, but certainly we would have applied the same methodologies to examining those loans if these companies were still extent and not in bankruptcy. You know, the process that we used in each case was totally independent, and we took a look at voluminous information on each one of these loans to try to gauge the risk at this time. We look at engineer's report, rating agency reports, and so forth.

So, we would have followed the same process there. You know, I would only be speculating as to what we would have found, however, because we did not look at those 2 companies.

Senator LEE. Might this have been one of those instances in which, as you acknowledged in your report, certain procedures were not followed, certain documents were not completed, and so forth?

Mr. ALLISON. I believe, Senator, that there are—investigations under way. I would only be speculating about that because I have no information about Solyndra that is not available in the newspapers.

Senator LEE. OK. Thank you. I see my time has expired.

Mr. ALLISON. Thank you very much.

Senator LEE. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you. Senator Franken.

Senator FRANKEN. I think if I just heard Senator Lee correctly, you said that if the risk is manageable, we should not be putting tax dollars at risk, and if it is not manageable, we should not be putting tax dollars at risk. Did I hear that correctly?

Senator LEE. I did.

Senator FRANKEN. So, therefore, we should not ever put tax dollars at risk.

Now, I agree with Senator Sanders. We have a global climate change problem. We had testimony from the director of the Forest Service the other day who said that the duration, intensity of these forest fires are caused by global climate change, and it is just going to get worse. We are spending more and more and more and more money on that. There is an actual cost to these taxpayer. Taxpayer money is at risk because of global climate change.

The bark beetle is eating more and more of our forests because of climate change, because they do not die from severe winters at certain elevations when they used to.

So, it is actually costing the taxpayer dollars are at risk if we do not address this and try to get to clean energy. So, it seems to me that our tax dollars are at risk if we do not do something. That what it seems to me.

So, it seems like we got to just do this as smart as possible. That is what it seems like to me. So, I want to follow up on Senator Wyden's comments and questions.

First of all, I just want to say I appreciate the thorough investigation you have conducted here.

Let me bore down something very specific. One of the most important aspects of Loan Guarantee program is the right credit subsidy of these loans. If the cost is too high to a company, it may not be able to seek a loan, and it may be a technology that has a lot of promise. If it is too low, the taxpayer may not be adequately protected from possible default.

As you noted in you report, in some cases these subsidy costs were underestimated, while in other cases they were over estimated.

My question is, can you tell us what you observed with respect to transparency of the credit subsidy cost calculation? Can the credit subsidy cost calculation for each individual project be done in a more transparent process that the public can access?

Mr. ALLISON. We did look at the credit subsidy process because we had to learn it in order to make our own estimates of what the credit subsidy we think should be.

Like any financial model, it has strengths and witnesses, given the intended purpose. The purpose of FCRA, the Federal Credit Reform Act, method used in budgeting is to have a consistent approach that applies to all programs across the government. FCRA can certainly do that if, for instance, it uses the same government discount rate pretty much for all these programs.

In terms of estimating the loss on these particular loans in the DOE portfolio, you then have to calculate a credit rating, and because the credit rating is used to determine what the default rate is expected to be given that credit. For instance, most of these credits are single B or double B credits. So, what is done is to look at years of data across many different types of loans that are rated, let us say, double B, and figure out historically what has been the default rate. Then you plug in that rate into the model.

Then there is a recovery rate. Let us say that the loan DOE's go bad and you have to recover in bankruptcy. What has been the typical rate of recovery against the amount of the loan, and/or the value of the assets after bankruptcy?

Now, the weakness in that model is that you are using indexes on default rates and recovery rates that apply to a wide variety of loans that are not particular to the idiosyncratic nature of these loans. So, there is no easy way, given the novelty of these loans, to calculate what the default rates and the recovery rates are going to be.

Fair market value, another method, has some advantages, and that it will apply an estimate of a market rate of discount to determine what discount what the investors would demand in order to purchase this loan at the interest rate that it has and get a market return given the risk.

That also has weaknesses because you cannot apply that in budget very easily across the government because you are—each discount rate would be different. There would be a lot of contention about what it is an appropriate discount rate for each one of these. I think it would be hard to have a standard budgeting process.

So, it is very important with all these models to understand what the purpose is, what the strengths and weaknesses of the models are. Last, do not give too much credence to these models in estimating what the ultimate loss will be, especially with loans like

these that have 2-year or 30-year lives that are dealing with novel technology, and where the government has the ability to control the risk and its exposure in a variety of ways through the loan covenants. It does not have to advance all the money, for example, if these projects are not meeting their contractual benchmarks.

So, given all that, that is why we concluded, here are the estimates using these models as best as we can do. Do not pay too much attention to them or think that, well, we are going to lose $2.7 billion. That is not the case. It may be more, it may be less. It could be a lot less than is indicated by that number.

What is important is to manage the portfolio very actively day to day. You have it. It exists. You better manage it very carefully on behalf of the taxpayers and use the terms and covenants in the loan agreements to the advantage of taxpayers.

Senator FRANKEN. So, my time is way up, but what you are basically saying is there is not necessarily a scientific subsidy calculation here for this subset, of loan guarantees, but the management of each guarantee is of tremendous important.

Mr. ALLISON. Yes.

Senator FRANKEN. Thank you, Mr. Allison. Thank you for your work.

Mr. ALLISON. Thank you.

The CHAIRMAN. Senator Paul.

Senator PAUL. Thank you for coming today.

Do you think that the commissioning of your study had anything to do with the political outcry over the bankruptcy of Solyndra?

Mr. ALLISON. Senator Paul, I could not speculate on that.

Senator PAUL. Were you commissioned after it became public that Solyndra was going bankrupt?

Mr. ALLISON. Yes.

Senator PAUL. OK. I find it curious then that we have this public outcry over this huge lapse of oversight where a billionaire gets a $500 million loan from the U.S. Government and goes bankrupt. Turns out that his attorney's husband works in the Department of Energy granting the loans, and we are going to study oversight and we are not going to look at Solyndra? I find that very, very curious.

My question to you would be, did anyone from the Administration ask you either verbally or in writing not to mention or look into Solyndra?

Mr. ALLISON. The direct answer to your question is no.

Senator PAUL. Did you have the power to look into Solyndra if you wished to? Your mandate looks to me wide open. You are supposed to look at oversight. Why would you not look at where the problem is?

Mr. ALLISON. I was asked to look at the loans, the extent loans, the loans that exist now.

Senator PAUL. It is says "current status of the portfolio, strengthen management and oversight of DOE's program."

Mr. ALLISON. Yes, sir.

Senator PAUL. If you are going to strengthen oversight, certainly you would have to look where the problems are. I would not think—I mean, this seems to be so myopic as to be politically motivated. I am very skeptical of why you do not look at Solyndra when

that is the whole reason you were commissioned was over Solyndra.

But here is the thing is, you have got Solyndra. You have got Beacon Energy going bankrupt. You have got BrightSource maybe going bankrupt. What about BrightSource? Did you look at BrightSource?

Mr. ALLISON. That was not part of this program, sir.

Senator PAUL. Is BrightSource not part of the current portfolio of Department of Energy loans? BrightSource got $1.8 billion from this loan portfolio.

Mr. ALLISON. Yes.

Senator PAUL. The thing is, is who owns BrightSource? Robert Kennedy, Junior, another politically connected Obama contributor who gets $1.8 billion of our money. You know what their profit? Their loss? They lost $13.5 million. They are $1.8 in hock. Is BrightSource ever going to get out of debt? Why are we giving taxpayer money to a family that has got hundreds of millions of dollars?

This is about crony capitalism. This is not about starting up solar panels. It is about giving money to people who have already got enough money. Let them make their own loans. If they love solar panels, let them do it. But I do not understand, and you do not—you did not look at any of the problems and how we come to conclusions about oversight if you did not look at the companies where the problems originated.

Mr. ALLISON. Senator, I think I understand your question. First of all, there are several investigations under way. If we were going to look at that, we would have needed investigatory powers, subpoena powers, the right to demand documents. We would have taken probably many months, if not a year, and we would have been going on top of the investigations already under way.

Senator PAUL. Then, very specifically, the public information that is out there on Solyndra that Solyndra's attorney's husband worked in the Department of Energy, does that have any red flags for you?

Mr. ALLISON. Again, Senator, I have not looked at those types of questions.

Senator PAUL. If you knew that the attorney for Solyndra's husband worked in the loan department granting the loans at the Department of Energy, does that send up red flags for you, yes or no?

Mr. ALLISON. Senator, I do not know the facts of that at all.

Senator PAUL. If you knew that in BrightSource somebody that used to work for the Kennedy family companies now works in the Department of Energy and approved the $1.8 billion loans, does that send up red flags? If you are commissioned to look at oversight, I mean, your reputation is on the line as an independent person——

Mr. ALLISON. Yes, sir.

Senator PAUL. You are commissioned to look at oversight, and you did not look at where the problems in oversight were.

Mr. ALLISON. Actually, Senator, we have looked at that. My point is, regardless of those facts, we were going to do as thorough a process of reviewing the policies and procedures of the Department of Energy regarding the management of this portfolio.

I think we did that. I think that we came to our independent conclusions about, first of all, how the portfolio is being managed, and you see a number of recommendations—about a dozen——

Senator PAUL. Do we give loans to foreign companies?

Mr. ALLISON. We gave loans—under the law, loans could be made to U.S. companies, and these——

Senator PAUL. Fisker Karma got $500 million. My understanding is they are spending it building cars in Finland. Is that true or not true?

Mr. ALLISON. At the time, and, again, we did not investigate whether the law was complied with in all cases. That was not part of our review. However——

Senator PAUL. Fisker Karma, did they get $500 million directed toward jobs in Finland?

Mr. ALLISON. The entities that borrowed the money are U.S. companies. They may have ownership from abroad, but they are U.S. companies. For instance, Nissan North America is a borrower, and it is owned by a Japanese company, but it is a U.S. corporation.

Senator PAUL. Thank you.

The CHAIRMAN. We have a second panel, which is Secretary Chu, and I would suggest we go ahead and thank Mr. Allison for his testimony and go ahead to our second panel, unless there is any burning reason not to.

Mr. Allison, thank you very much. We appreciate your being here and your testimony today.

Why do we not see if we could ask Secretary Chu to come in so we can hear his perspective and ask him some questions?

Mr. Secretary, thank you for being here. Welcome back to the committee. As you know, we just received testimony from Herb Allison about his report reviewing the Department of Energy loan and loan guarantee portfolio. We would be anxious to hear any thoughts you have on that very same subject, and then I am sure senators will have questions. So, go right ahead.

STATEMENT OF HON. STEVEN CHU, SECRETARY, DEPARTMENT OF ENERGY

Secretary CHU. Here we go. Thank you, Chairman Bingaman, Ranking Member Murkowski, and members of the committee. Thank you for the opportunity to discuss the Department of Energy's efforts to strengthen our Loan Programs and to grow America's clean energy economy.

As part of our commitment to be a responsible steward of public dollars, the Department has cooperated with Congress' request to discuss our loan portfolio and welcomed the independent review of Herb Allison.

Mr. Allison released a thorough, thoughtful report. He made some important recommendations to strengthen the management and oversight of the loan portfolio. Even before the conclusion of Mr. Allison's review, we took steps, many of which are consistent with the report's recommendations, to improve the Loan Programs.

This includes working to ensure that our team has a sufficient number of skills and experienced personnel to monitor and manage the portfolio to protect U.S. taxpayers. We have improved, and will

continue to improve, processes for productive monitoring, loan administration compliance, reporting, and resolution capabilities to take into account industry best practices. In addition, we have put in place rigorous internal and external reviews to hold the Loan Program Office accountable.

The Department takes its responsibility to the U.S. taxpayers seriously, and we are looking closely at Mr. Allison's recommendations for additional improvements.

Mr. Allison and his team reviewed each active loan in the portfolio, looking at the risk factors behind each loan and estimating each loan's cost. Mr. Allison's report concluded the Department is using the appropriate risk factors in assessing each loan.

The Federal Credit Reform Act defines the cost of these loan programs as the estimated long-term cost to the government, including the risk of default. For each loan, the subsidy estimate can be thought of as similar to the loan loss reserve—to similar to a loan's reserve.

Congress appropriated $10 billion in credit subsidy under the Federal Credit Reform Act for title 17 Advanced Vehicle Loan Programs. While the portfolio includes loans to a range of projects that carry different levels of risk, the reports finds that the Department of Energy has reasonably estimated the costs of these risks. In fact, Mr. Allison estimates that the long-term costs of the outstanding portfolio is $2.7 billion, roughly $200 million lower than the Department's most recent estimate.

The purpose of the Loan Programs is to provide low cost financing to innovative clean energy projects that have a unique value to the Nation both in terms of providing clean energy and inspiring the development of new industries. Overall, the Loan Programs have been successful in growing America's clean energy sector.

The Department supports roughly 3 dozen clean energy projects that are expected to employ more than 60,000 Americans, generate enough clean electricity to power nearly 3 million homes, and displace nearly 300 gallons of gasoline annually. As these are just direct benefits, they do not include additional supply chain jobs.

Our Loan Program is spurring tens of billions of dollars in investment in clean energy projects, and helping to unlock private capital. Thanks in part to the Loan Programs, last year the United States regained its title from China as the world's leader in total investment in clean energy.

The Department of Energy is using all the tools at our disposal, including the Loan Programs, to strengthen America's clean energy economy so we can compete globally.

Improvements in technology and dramatic reductions in cost are driving a global revolution in clean energy. Last year, a record $260 billion was invested globally in clean energy. The question is no longer whether a clean energy economy will arrive, but whether America will lead it. As the opportunity grows, so does the competition. Many countries have established supportive policies and are making major investments in everything from renewables to electric vehicles, to next generation biofuels. To win the clean energy jobs of the future, the United States must do more than invent technologies. We must also manufacture them, deploy them here at home, and sell them around the world. Production of energy tech-

nologies benefits from scale. Simply put, to have a competitive clean energy industry, we need programs that help spur deployment and markets.

America faces a stark choice today. Will we play to win the clean energy race, or will we watch the rest of the world passes us by? Can we invest in America's workers industries—we can invest in America's workers, industries, and innovation, or we can send money and jobs overseas to import the technologies of tomorrow.

Throughout our history, from aviation to agriculture to computer technologies, the Federal Government has supported the private sector to keep the United States at the technological forefront of important industries. It is time to take a page from our own playbook. We can still win the clean energy race, but we must act now.

I know this committee cares deeply about our energy future, and I look forward to working with you to ensure that the United States leads in the clean energy economy. So, thank you, and I am pleased to answer your questions.

[The prepared statement of Secretary Chu follows:]

PREPARED STATEMENT OF HON. STEVEN CHU, SECRETARY, DEPARTMENT OF ENERGY

Chairman Bingaman, Ranking Member Murkowski, and Members of the Committee, thank you for the opportunity to discuss the Department of Energy's efforts to strengthen our loan programs and to grow America's clean energy economy.

The Department's loan programs have been the subject of much public attention. As part of our commitment to being a responsible steward of public dollars, the Department has welcomed and cooperated with Congress' requests to discuss our loan portfolio. We also welcomed the independent review by Herb Allison, which we are here today to discuss.

Mr. Allison was tasked with: 1) analyzing the current state of the loan and guaranteed loan portfolio under two Title XVII programs—Section 1703, Section 1705—and the Advanced Technology Vehicle Manufacturing loan program; 2) making recommendations for enhancement to the programs, if warranted and practical, to ensure effective monitoring and management of the current loan and loan guarantee portfolio: and 3) making recommendations, if needed, pertaining to early-warning systems to identify and mitigate potential concerns on a timely basis.

Mr. Allison released a thorough, thoughtful report. He made some important recommendations to strengthen the management and oversight of the loan portfolio. Even before the conclusion of Mr. Allison's review, we took steps—many of which are consistent with the report's recommendations—to improve the loan programs.

This includes ensuring that our team has a sufficient number of skilled and experienced personnel to monitor and manage the portfolio. We continue to work to make certain that the Portfolio Management Division has the resource capacity and expertise to actively monitor loan and loan guarantee transactions to protect U.S. taxpayers.

We have improved, and will continue to improve, processes for proactive monitoring, loan administration, compliance, reporting, and resolution capabilities to take into account industry best practices. And we have upgraded the electronic systems of the Loan Programs Office to better automate and standardize data, so it can be reviewed and acted upon in a timely and streamlined manner, and best inform decisions.

In addition, we have put in place rigorous internal and external reviews to hold the Loan Programs Office accountable. The Department takes our responsibility to U.S. taxpayers seriously, and we are looking closely at Mr. Allison's recommendations for additional improvements.

Mr. Allison evaluated both the monitoring efforts of the Loan Programs Office and its portfolio. As part of this effort, he and his team reviewed each active loan in the portfolio. They looked at the risk factors behind each loan and estimated the costs of each loan. Mr. Allison's report concluded that the Department is using the appropriate risk factors in assessing each loan. In some cases, the report recommended minor differences in the weights given to each factor.

The Federal Credit Reform Act defines the cost of these loan programs as the estimated long-term cost to the government, including the risk of default net of recov-

eries; for each loan, the subsidy estimate can be thought of as similar to a loan loss reserve. Congress appropriated $10 billion in credit subsidy under the Federal Credit Reform Act for Title XVII and the Advanced Vehicle Loan Programs. Not all of the appropriated credit subsidy has been obligated.

While the portfolio includes loans to a range of projects that carry different levels of risk, the report finds that the Department of Energy has reasonably estimated the costs of these risks. In fact, Mr. Allison estimates that the estimated long-term cost of the outstanding portfolio is $2.7 billion, roughly $200 million lower than Department's most recent estimate.

The purpose of the loan programs is to provide low-cost financing to innovative clean energy projects that have a unique value to the nation—both in terms of providing the clean energy our nation needs and in spurring the development of new industries that can generate many more jobs down the line.

Overall, the loan programs have been successful in growing America's clean energy sector. The Department supports roughly three dozen clean energy projects that are expected to employ more than 60,000 Americans, generate enough clean electricity to power nearly 3 million homes, and displace nearly 300 million gallons of gasoline annually. And these are just the direct benefits; they do not include additional jobs and investment that come from supply chains.

Through active projects supported by loans and loan guarantees, our Loan Programs are spurring $40 billion in investment in clean energy and advanced vehicles and helping to unlock private capital. Additionally, the success of these projects is generating additional private sector activity by serving as a model for other projects. Thanks in large part to the loan programs and other federal programs, last year—for the first time since 2008—the United States regained the title from China as the world's leader in total investment in clean energy.

The Energy Department is using all of the tools at our disposal, including the loan programs, to strengthen America's clean energy economy so we can compete globally.

Improvements in technology and dramatic reductions in cost are driving a global revolution in clean energy. Last year, a record $260 billion was invested globally in clean energy, and trillions of dollars more will be invested in the coming decades. The question is no longer when the clean energy economy will arrive, but whether America will lead it.

As the global clean energy opportunity grows, so does the competition. Countries throughout Europe, Asia, and the Western Hemisphere have decided that energy technologies are critical to their national and economic security in the 21st century. Many countries have established supportive policies and are making major investments in everything from renewables to electric vehicles to smart grids and the next generation of biofuels.

At least 10 countries have adopted renewable electricity standards, and more than 50 countries offer some type of public financing for clean energy projects. For example, Germany and Canada operate government-backed clean energy lending programs, and China has provided strong support to its clean energy industries.

These countries are determined to win the global clean energy race. And by any measure, they are already reaping rewards on their investments. Americans invented the silicon solar cell, developed modern wind turbines for electricity generation, and developed lithium ion batteries, but we are no longer the leader in these industries. China has surged into the solar manufacturing lead. Denmark is home to the world's largest wind manufacturer, and Japan and Korea lead in advanced battery manufacturing, although the United States is making strong gains.

To win the clean energy jobs of the future, the United States must do more than invent technologies; we must also manufacture them, deploy them here at home, and sell them around the world. The production of energy technologies benefits from scale. Simply put, we cannot have a competitive clean energy industry without programs that help spur deployment and markets.

America faces a stark choice today. Will we play to win the clean energy race—creating U.S. jobs by making and selling clean energy technologies—or will we watch the rest of the world pass us by? We can invest in America's workers, industries, and innovations or we can send more money and jobs overseas to import the technologies of tomorrow.

Throughout our history, from aviation to agriculture, from biotechnologies to computer technologies, the federal government has supported the private sector to keep the United States at the technological forefront of important industries. In clean energy, other countries are running our plays. It's time for us to take a page from our own playbook. We can still win the clean energy race, but we must act now.

This is a serious issue that deserves a serious discussion. I know this committee cares deeply about our energy future, and I look forward to working with you in

the coming months to ensure that the United States leads in the energy technologies of the 21st century. Thank you, and now I am pleased to answer your questions.

The CHAIRMAN. Thank you very much for being here. Let me start with a very general question. You advocated strongly for winning the clean energy race, which I have heard you say before, and I have done myself many times. In fact, I think it is clear to all of us that we really have several different clean energy races. One, of course, is in the development of these new technologies. ARPA–E is working on that. I know the Department has various other efforts going to achieve that.

A second so-called clean energy race might be the manufacturing of these technologies so that we create the jobs here that are going to be created in this area.

Third is the deployment of clean energy technologies, and I think you correctly point out that there is a real possibility that we would essentially cede to the rest of the world the ability to develop and manufacture technologies and just decide all we can do here is import them and hopefully deploy them. But it is a different challenge.

I guess that Senator Wyden correctly pointed out that when we put the Loan Guarantee program into the 2005 law, we had not separated out the different types of clean energy or energy projects that might require some level of government support through a loan guarantee, and we hadn't perhaps adequately segregated those out.

I would be interested in any general thoughts you have about the appropriateness of us going back and trying to be sure that we are doing all we can in each of these various races to be sure that the United States does not drop out of the competition.

Secretary CHU. Sure. I have listened to a portion of Herb Allison's testimony, and I agree with him and the report. The report took the Loan Program and divided it into certain sectors. If you consider a sector where you are deploying a known technology, whether it is wind or solar, something which has a proven track record, there are considerably—especially if that project then has a utility company, which is a solid utility company with a good bond rating, with a long-term so-called power purchase agreement. That is to say, you have signed into contract this utility company will pay this amount for this electricity generated by wind or solar.

As long as that utility company is a strong, stable company, the risk of that loan is different than the risk of a new innovative startup company. It is a considerably less risk, but it does help very much in the deployment of these large projects. So, that is one class of loans.

The other class of loans that Congress asked us to invest in are investments in clean innovative manufacturing, whether it is an ATVM loan or whether it is something in the energy generation business. That by its very nature might carry a different risk.

However, the mechanism that we were tasked with using, the so-called FCRA rules, tries to assess what are the risks to these loans. Using that estimation, the Allison report says that we were a little bit higher, but essentially on par with their evaluation of the risks of those loans; and that Congress had appropriated that money—

appropriated, not authorized, appropriated, meaning that money could have been spent on other things. It could have been spent on research. It could have been spent on hiring policemen, firemen, and teachers. But they chose to appropriate because they recognized that it was an opportunity to actually help these industries and help create jobs.

The CHAIRMAN. Let me ask one other question. I think Mr. Allison also said that it is extremely important that you get the right professional employees working at the management and oversight of this loan portfolio over the long term, and that in order to do that, you need to have assured funding for this activity so that people might actually consider leaving the private sector and coming to work for the Department to pursue this management of these loans. Do you have any comment on that recommendation?

Secretary CHU. Yes. I agree with that recommendation. I think it is very important, and we are in the process of trying to bring in career professionals, because as he noted in the report, that many—because we had to stand very quickly, we had a number of consultants to give us the financial expertise. We would very much want to bring into this program career people who have experience in project finance, experience in finance in general. So we agree with that.

It is very important—because of the long tenure of these loans, some of them 25, 30 years, it is very important—and because have specific grant milestones, that we pay very close attention—milestones that then allow the loan program to give another tranche of money. It is very important that we follow each of the loans carefully.

The CHAIRMAN. Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman. Secretary, thank you for being here this morning. It is important to hear Mr. Allison speak to the audit, but I think it is equally important that you as the Secretary of the Department of Energy be here to speak to some aspects of the loan program.

In the report from Mr. Allison, he states that "DOE should better define the desired balance between policy goals and financial goals. I look at that and to me it is a pretty basic managerial function, and I guess I was a bit surprised to learn that from the audit's perspective, Mr. Allison's perspective, that that was, in fact, lacking.

So, the question to you is, how would you grade the Department's implementation of the Loan Guarantee program thus far?

Secretary CHU. When we started, it was new. We have made a lot of improvements, and will continue to make improvements, especially since we all know that—we all know that sometimes the industry that a particular loan might be embedded in could rapidly change. That, in particular, is something where you need to watch on sometimes a weekly basis.

So, I could not say an official grade, but I think one of the things that the Allison report and Mr. Allison were talking about is, for example, the vagueness also goes to not only the Department policy, but the law itself. What do you mean by a significant chance of payback?

Senator MURKOWSKI. I mean, that is an important thing.

Secretary CHU. Right.

Senator MURKOWSKI. As a committee here, I think we are tasked with this oversight program.

Secretary CHU. Right.

Senator MURKOWSKI. The Loan Guarantee program is in place. I want to make sure that it is working as we had hoped that it would, and we would not see, again, some of the somewhat stunning failures that we have seen from it. Based on, again, the results of the audit, what you have observed in through your interactions through your folks, it looks to me like we need to do some changes. This is not tweaking a program, but some serious changes to this program so that we do have assurances to the taxpayers, so that we do have a structure in place that provides and allows for a level of accountability.

I know that Senator Stabenow is probably going to ask about the ATVM——

Secretary CHU. ATVM.

Senator MURKOWSKI. ATVM, thank you. Program and the fact that we have not seen those loans go out the door. Under the 2005 act, we have not seen any of those loans go forward, and then from the results from the stimulus dollars that came in, we had a lot of money go out the door, and that is where we are seeing some pretty serious concerns.

So, I am looking at this, and if I had to give a grade, if I had to assign a letter grade to the Department at this point in time, it is not a passing grade. I think we need to be able to do much, much better. You have suggested that you are going to be moving forward with some policy changes, but I think we need to be aggressive about that.

Let me ask a question. This is kind of a follow-on to what I had asked Mr. Allison. Some of the conditions that are in the 2005 energy bill as it relates to the Loan Guarantee programs, one of them is the reasonable prospect of repayment. We certainly faced that with Solyndra and Beacon's failure to repay the loan. There is another requirement in the law that says that no guarantee shall be made unless the Secretary, you determine that the amount of the obligation is sufficient to carry out the project.

It is now clear in hindsight that with Solyndra, that condition was not adhered to. Seventy-million dollars had to come in from private investors. To make that happen, what we saw then was the subordination. DOE put taxpayers second in line in that bankruptcy, and that has caused a great deal of consternation.

Did you make the determination at that time—as the law requires, did you make that determination that the amount available when the loan guarantee was closed that they were sufficient to carry out the Solyndra project? If you did make that determination, then how do we get to where we are today, which, again, is a bad mark on the books?

Secretary CHU. When the loan closed during the commitment and when the loan closed, there was a world of difference to when at the time of the restructuring of the loan. By the time of the restructuring of the loan, we knew that the company was in deep trouble.

But to your earlier point about what we intend to do, much of the things that were in the Allison report we are doing. We have

set up a risk committee. Mr. Allison and his colleagues recommended that there be a risk management structure. We agree with that. But we set up a different independent—a different, but a different part of the loan program that would look at just strictly the risk as future disbursements go out. So, that is something we did before the Allison report was submitted, and the report acknowledged that we were doing that.

We are taking his advice, and we have reached this ourselves that we need people outside the loan program per se to be part of this evaluation. That is very important that we get additional sets of eyes on that.

So, in terms of the specific loan to Solyndra that you mentioned, again, it was a rapidly changing dynamic during this period of time, and during that restructuring, we knew that the chance of repayment was low. But what we did was we did something that would—we thought in the best interest of the taxpayer, as Mr. Allison pointed out. When asked specifically would you be in favor of a legal requirement that would not subordinate anything.

He pointed out very clearly that we followed the statute, at time of origination no subordination. But there have to be mechanisms to draw additional investments to give the highest chance of recovery to the taxpayer.

So, what we did, and I think the Allison report confirms that, is that we were doing things that would ensure the highest return of the taxpayer money given the circumstances, the rapidly changed circumstances.

Senator MURKOWSKI. My time has expired, and I want my colleagues an opportunity to speak. But I do think it is important that we also look to some of the other aspects of that Allison report that speak to the importance of the real time controls to make sure that the risks are properly managed. I think Solyndra is a perfect case in point where we missed on that with regards to the polysilicone issue, and where Solyndra was at that point in time as opposed to others in the solar panel manufacturing business.

But I am going to defer to my colleagues so that they have an opportunity to question.

The CHAIRMAN. Senator Shaheen, you have not had a chance to ask questions. Go ahead.

Senator SHAHEEN. Thank you very much, Mr. Chairman, and thank you, Mr. Secretary, for being here.

Yesterday I held a hearing on the USS Kearsage actually down at the Norfolk Naval Shipyard. It was the Water and Power Subcommittee of this committee. We heard from Secretary of the Navy Ray Mabus. We heard from former Secretary of the Navy and Senator John Warner, and also from some of the top-ranking officials within the Navy and the Marines about what they are doing to implement energy efficiency and new sources of energy within the Navy and among the Marines who are on the front lines in Afghanistan.

We heard a couple of things that I think are important to this discussion. One is that being able to look at alternative energy sources, renewables, that can be used out in the field are critical. Reducing our dependence on foreign oil is vital to our national de-

fense, and that there is a direct correlation between our dependence on fossil fuels and casualties on the battlefield.

Now, one of the things that I would hope you might address this morning, and I would point out that I know the Energy—the Department of Energy is working closely with the Navy, with the Department of Agriculture on biofuels, which are a critical piece of trying to reduce the dependence of our military on foreign oil. But can you talk about how the programs that we are talking about as part of the Loan Guarantee program relate to our national defense and how critical they are if we are going to make some of these changes on the military side of our government?

Secretary CHU. Certainly. Let me begin with biofuels, and not only in the Loan Guarantee program, but a lot of the things we invest in across energy from the Office of Science to Energy, to ARPA–E. We think that biofuels have considerable promise. By that, I mean we think they have considerable promise in developing technologies that can compete in the open market without subsidy, and that is our goal.

The United States has great agricultural resources. If we can use biological waste or things that do not compete with prime farmland, we think this is a great opportunity to offload some of our dependency on oil, especially if the technology had advanced to the point where you can produce biofuels, and sell their profit, and make it a business of, let's say, moderate price of oil at $80 a barrel, something like that.

We also do a lot in terms of offloading a lot of other dependencies on oil to help not only the military, but the consumers and businesses. The advancement of batteries is very important. Batteries are very important in a forward deployed place, because rather than trucking in through very hazardous supply routes, usually diesel fuel to generate electricity, you could have a lightweight solar system with a lightweight battery that could be part of your supply chain. So, that is a very——

Senator SHAHEEN. We actually saw a demonstration of that yesterday. That was very impressive. We saw the solar blankets that are already in use in Afghanistan and heard about how much weight it saves our soldiers, and also, again, not having to provide those resupply convoys.

Secretary CHU. Right. So, that is yet another aspect of decreasing, you know, as people attack these supply lines. Some of our soldiers and employees die from these attacks. We think it is very important that we develop these programs.

Remarkable progress with batteries, for example. Recently at an ARPA–E summit conference, a company we supported announced that they doubled the world record energy density for lithium ion batteries, which appears to have no additional costs in the manufacturing. They are actually optimistic it can go much better than that. So, this is something that is going to be very important.

So, we look across—and then finally energy efficiency is something not only for the forward deployed areas, but in general for the military we think it is a very important part of stretching the U.S. taxpayer dollars so the military can help our security in a way by saving money and by saving energy. It is a very important deal,

and we have a very close working relationship with the Department of Defense on that.

Senator SHAHEEN. Again, we saw some excellent examples of that, which save money, but also make us less dependent and more efficient.

My time is up, but let me just make one other comment about that hearing because one of the other things we heard from all of the military officials who testified was the importance of sending signals to the private sector about the importance of these energy efficiency and renewable technologies that the government has a role to play in doing that. That is very important to our national security.

Thank you, Mr. Secretary.

Senator STABENOW. [Presiding] Thank you. Senator Bingaman had to go to the floor to speak to an amendment, and so in his stead I will call on Senator Lee.

Senator LEE. Thank you, Madam Chair. Thank you, Mr. Chu, for joining us today.

Shortly before you became the Energy Secretary, you were quoted as saying, "Somehow we have to figure out how to boost the price of gasoline to the levels in Europe." The price of gasoline in Europe, as I understand it, were about $8 a gallon, which is a lot of money. Last week in your testimony over in the House of Representatives, it is my understanding that you indicated that high gas prices are helpful in some ways in spurring research on alternative energy.

I understand the point. I respectfully disagree with the conclusion at least insofar as it is made to the exclusion of another, I think, more compelling point, which is a strong economy will always provide more capital that can be invested for research and development purposes. Research and development money is definitely needed to help develop alternative energies. So, I hope you take that perspective into account.

I do not think that high gasoline prices help anyone. I do not think they do anything other than the American people. Look, I do not how much driving you personally do yourself, and so you may not personally be feeling the gouge at the pump. But I assure you that hundreds of millions of hardworking Americans do feel this. They feel it every time they refuel their cars, some a lot more than others, but all feel it.

While hardworking Americans continue to suffer because of the prices they pay at the pump and the corresponding prices that they have to pay at the grocery store and everywhere else because all of these costs end up getting passed downstream. I hope the Administration will take that into account in its energy policy and pursue an energy policy that acknowledges the fact that whether we like it or not, we as a people, we as human beings living in this country today continue to be dependent on liquid fuels. We have to continue to have a source of them, and that means we need to continue a robust policy of aggressive exploration and production of petroleum and natural gas.

Instead I have seen a focus on this Administration that has placed most of its emphasis in this area on some failed policies, including a lot of subsidies of alternative energy projects.

On that note, the recent GAO audit of the Loan Guarantee program found that "DOE did not always follow its own process for reviewing applications and documenting its analysis and decisions, potentially increasing the taxpayer's exposure to financial risk from an applicant's default." It went on in that same report to determine that DOE "also has not completely documented its analysis and decisions made during reviews, which may undermine applicants' and the public's confidence in the legitimacy of its decisions."

Are these accurate? Are these statements accurate in your opinion?

Secretary CHU. Let me first respond to your first statement, Senator, so I can correct the record. Since I walked in the door as Secretary of Energy, I have been doing everything in my power to do what we can to reduce these, as we see these gas price spike, to reduce those prices. The Administration, the President, and I personally, yes, we do acknowledge and feel the pain of not only the American consumers, but American businesses when they see these prices increase.

What we can do, is use all the tools available we are using. But in the Department of Energy's tool chest, the most important thing we are doing is to offload the dependency on oil, using natural gas for transportation, electrification, biofuels, all of those things.

Now, regard to the——

Senator LEE. So, are you saying that you no longer share the view that we need to figure out how to boost gasoline prices in America.

Secretary CHU. I no longer share that view.

Senator LEE. OK. You did then, but you do not now?

Secretary CHU. When I became Secretary of Energy, I represented the U.S. Government, and I think that right now in this economic, very slow but, you know, return, that these prices well could affect the comeback of our economy, and we are very worried about that. So, of course we do not want the price of gasoline to go up. We want it to go down.

But let me go to the GAO report. The other part of the GAO report within a few sentences of that said explicitly that the diligence that we did in our Loan program was actually considerably more thorough than what the private sector did. The thing you are referring to, and I admit there is some truth in that, is that we had at the beginning of this Loan Program which started in 2007—well, ePACT 2005, but in seriousness about 2007. A lot of the input was in paper form. A lot of the input was such that it was, you know, we are moving toward making those records electronic so that you can have a more modern data system. This is not only true of our Loan Program quite frankly, it is true throughout the Department of Energy.

As a kind of a techno geeky guy, I actually like the idea that we have electronic records rather than paper records, and I encouraging the Department to make this transition. We are doing it in the Loan Program.

Senator LEE. You think that will bring about more compliance with the Department's own processes?

Secretary CHU. I believe the GAO report said that because the records are here and there and not in a central repository, that it

would be harder for the Loan Program overall to see what is going on. So, as part of this risk management going forward, we recognize that we need central repositories of data so that you can get instant access. We recognize that.

Senator LEE. OK. My time has expired. Thank you.

Senator STABENOW. Thank you very much. Secretary Chu, I think it is probably no surprise that I am going to talk to you about the vehicle technology program.

First, let me say in your testimony, when you talk about the back bit. To win the clean energy jobs of the future, the United States must do more than invent technologies. We must also manufacture them, deploy them, sell them around the world. I could not agree with you more.

I appreciate the fact when I was able to make this program part of the 2007 energy bill that passed, it was not implemented in the last Administration, and that it was a priority for you and the Administration. It was, in fact, implemented in 2009. That is the good news.

We have good things to report: jobs being saved, jobs coming back from overseas. Now we are in a spot where we have incredible delays year after year after year. We have on company that, in fact, indicated that after spending $25 million as a startup on a –year application, their application was never completed.

I am very concerned about where we are right now on something that clearly goes to the heart of keeping advanced manufacturing in this country. You know that we are competing with countries around the world. Our companies are competing with countries that are providing tax incentives, that are providing financing mechanisms, doing a number of things. The retooling loan program goes right to that effort of adding advanced technology and manufacturing to keep jobs here rather than overseas.

So, I wonder as we look, of course we want to protect taxpayer dollars. Of course that is absolutely critical. But how do we streamline this process at this point so that it actually is meeting the goal that it was set up to do?

Secretary CHU. Senator, I think we are very much on the same page here. We are in total agreement with regard to the importance of the ATVM loans. We believe that that ATVM loans, for example, the loans to Ford and to Nissan, saved or generated many, many thousands of jobs. Ford alone, I think, it is over 30,000. A bit of a success story because that loan enabled Ford to retool, to sell—it is now a major leader internationally in selling very desirable, competitive cars. This is exactly what that loan programs was intended to do.

Senator STABENOW. Right.

Secretary CHU. It is a great success. I think the, you know, the loan to Nissan to generate—produces cars in Tennessee, a place in the United States. Another great success.

Now, having said that, we do have to look at taxpayer money. As conditions change, we have to say—again, going back to the original covenant of the law which says in these loans, is there a reasonable chance of repayment? In many instances, we feel that we would like to see private equity be invested in these companies,

and then there are milestones after that private investment so that we can then say, all right, we can help you grow your business.

So, we are very, very sensitive to those things, again, trying to balance the line, as you noted, between stimulating the manufacturers with these loans, and, again, one of the big success stories of this Loan Program, and making sure that—especially in a newer company, whether—we independently assess whether their market projects do make sense in this very rapidly dynamic market—and so we try our best to do that, both to look out after taxpayer money, but knowing that we do want to stimulate investments in manufacturing in the United States.

Senator STABENOW. Right, and I appreciate that, Mr. Secretary. I would just tell you that the—at this point, the way things have gotten bogged down in the slowness of it is defeating the whole purpose of what needs to be done, because it is creating an untenable situation for businesses that are on the edge to be able to move forward, to create these new technologies. But waiting 3 years is just too long to be able to come up with those judgments.

Let me ask you one other thing. What changes would you suggest to make this program more effective, and possibly add more opportunities for companies? We have passed now twice from this committee legislation of mine that would expand to medium and heavy duty vehicles. We know there is tremendous energy savings in larger vehicles, a very exciting work that is being done. Would you support something like that, expanding us to more opportunities to save energy and create jobs?

Secretary CHU. I think this is a program I would be delighted to talk to you about it to broaden its scope certainly as you suggest, but also in certain things when it is really advanced technology and it is an advanced technology in a new company, you know. Again, working with Congress, I do not know if Congress has the appetite, but to change some of that money, especially with ATVM, so it could not only be for loans, but it also could be for grants for developing new products.

I think that would do a lot, grants that would allow the company to prototype things that could then be made in America. So, I would be gladly willing to work with Congress if Congress deems that this is an important program to stimulate job growth in the United States, advanced manufacturing in the United States. That could be another way of broadening the program.

Senator STABENOW. Thank you. Senator Barrasso.

Senator BARRASSO. Thank you, Madam Chairman. Mr. Secretary, I appreciate you being here.

The Department has awarded a $10 million prize for their production of a light bulb that is supposed to be, one, energy efficient and, 2, affordable for American families. The prize went to Phillips Lighting. Do you know how much the winning light bulb retails for in the United States?

Secretary CHU. I am going to make a guess, about $40 or $50.

Senator BARRASSO. Actually it is $50. Headline Washington Post last Friday, "Affordability Award Goes to a $50 Light Bulb." I guess—do you think a $50 light bulb is affordable for American families where the government's own figures say the average household in the United States has over 40 light bulbs? So, it

sounds like we are—are we asking American families to spend over $2,000 to trade out all their light bulbs?

Secretary CHU. No, absolutely not. We are not asking American families to spend $40 or $50 for a light bulb. The prize was intended to incentivize the development of new technologies. Some of those LED technologies in commercial use, in buildings and hard to get places where you have to hire people to go up on a crane, already are very affordable. Commercial uses in traffic lights, very—already pay for themselves. So, the idea was to stimulate future development.

Senator BARRASSO. The President claims that he and his Administration are promoting fairness. He talks about fairness an awful lot. There was a Thursday story in the Washington Post with a headline, "More Than Half of Obama's Big Fundraisers Got Jobs in His Administration." The article explained how bundlers, those who collected at least $500,000 for the President's campaign, were given jobs in the Administration.

It says one hired—Obama hired bundler Steve Spinner as a liaison in the Energy Department, and according to internal e-mails, Spinner pressed for staff members to finalize a government loan for Solyndra in which another campaign bundler was a major investor.

Yesterday the Government Accountability Office released its own audit of the Department of Energy loan program. The report concluded that the DOE did not follow its own process for reviewing applications and documenting its decisions, potentially increasing the taxpayers' exposure to financial risk from an applicant's default.

You know, it seems like the Administration is doing a pretty good job looking out for its friends, but I want to know who is looking out for American taxpayers, and this sure does not sound fair to most people.

Secretary CHU. First, Steve Spinner was absolutely firewalled from making any decision or encouragement on what you make for any loan, let alone the Solyndra loan. So, what he was pressing for was after the conditional commitment was made, he was pressing to finalize things. But he was not part of the decisionmaking process.

Senator BARRASSO. I would like to ask about additionally the gas—I'm sorry, electric vehicles. The President was in North Carolina giving another speech on energy, promoting electric cars. Last week we learned that General Motors was suspending production of its electric car, the Volt, because it failed to meet sales expectations. Last month we learned that your Department cutoff funds to Fisker Automotive and other electric car manufacturers because it failed to meet sales expectations.

So, I look at electric vehicles, which range from $40,000 to over $100,000, and I ask if those are practical solutions for families who are struggling to pay bills, especially as the President is proposing increasing the tax credit for what are essentially luxury vehicles, and he wants to increase it from $7,500 where he did not get adequate takers and the vehicles have not been sold, to now to $10,000.

Is raising the tax credit for these vehicles that few families can afford the right thing to do and the fair thing to do?

Secretary CHU. As you may know, but if you do not, the goal of the Department of Energy is to develop the technologies that actually will drive down the price of electric vehicles or plug in hybrids so that, for example, in the $20,000, $25,000 range, the cost of ownership would be less than a conventional internal combustion engine car, let us say, of $16,000, because you are going to be saving in gasoline bills.

If, for example, you take a car, an internal combustion car, and it gets 30 miles to a gallon, reasonably good combined driving numbers, that is, in today's gasoline prices, this is horrendous—$1,400 a year. This is a horrible pain to American consumers.

If you get an electric vehicle that costs, let us say, in the low 20s, $20,000, $22,000, to drive the same amount, let us say 10,000 miles, it is about $300 in electricity. So, we are very focused on driving the costs of those electric vehicles down. So, it is is exactly what you say, that the costs of a vehicle that the American public can afford.

Senator BARRASSO. Thank you, Madam Chairman—oh, Mr. Chairman.

Senator SANDERS. [Presiding] I gather I have the invisible gavel here. Mr. Chairman, thanks very much for being with us.

Let me just ask you—before I ask you a question, I wanted to agree with Senator Lee a moment ago, who talked about the high price of gasoline and what it does to rural America. I come from a rural State and many people travel long distances to work. I would hope that some of my Republican friends would work with us on what we think is one of the major causes of the high price of gas right now; that is, speculation from Wall Street companies on the oil futures market.

We believe, and I think the evidence is pretty clear, that over 80 percent of the oil futures market is now controlled not by end users—airline companies or fuel dealers, people who actually use the product—but by Wall Street companies who are speculating on the price of oil and driving oil prices substantially up. Goldman Sachs themselves, one of the major speculators, estimated that speculation was adding about 56 cents to a gallon of gas.

Do you have any comments on that, Mr. Secretary?

Secretary CHU. I cannot speak to the estimate that Goldman Sachs has made and actually put on an additional price that adds to the speculation. But I agree with you that, you know, whereas futures do play an important role, for example, if Southwest Airlines or someone else wants to levelize their cost of energy, they buy a future, and they are going to take delivery. But they actually are going to use the fuel.

Senator SANDERS. Right.

Secretary CHU. So, it is a financial mechanism that helps them plan for the future. So, futures in that sense play a very important role in stabilizing a company's prospects. I would agree with you, but when futures get traded back and forth, back and forth, back and forth, where no one actually intends to take delivery, it enters into a different regime.

But to the extent of how it modifies prices, I do not know, but it is not what it was meant to do.

Senator SANDERS. Let me ask you this. My understanding is that right now we have about 100,000 Americans working at more than 5,000 solar companies. I think sometimes if we hear discussion around here, the impression is that sustainable energy is just doing terrible. Companies are not making money. We are not creating new jobs. Would you agree with me that, in fact, in terms—in recent years, not unrelated to the work that you and the Department of Energy are doing, that, in fact, we have seen a significant increase in the number of jobs and the installations in terms of solar panels and in terms of energy being produced from wind? Are we making progress and creating jobs in those areas?

Secretary CHU. We are. We have been making dramatic progress, I think, since 2008. It should be used as a benchmark. I think we have almost doubled the amount of renewable energy with those 2 sources.

Senator SANDERS. That is not insignificant.

Secretary CHU. Doubling is not insignificant.

Senator SANDERS. Doubling is not, and we are creating jobs——

Secretary CHU. Yes.

Senator SANDERS [continuing]. As well. Would you agree with me that virtually the entire scientific community, not only in this country, but around the world recognizes, A, that global warming is real and, B, that it is significantly caused by human activity, and, C, that if we do not get a handle on greenhouse gas emissions, there will be enormous problems associated with all kinds of—in the future of this country?

Secretary CHU. Yes, I agree with that.

Senator SANDERS. OK. Let me ask you this, Mr. Secretary. We are talking about the role the Federal Government plays in terms of support of various energy technologies. Is sustainable energy the only technology that received help from the Federal Government?

Secretary CHU. I would say, looking backward, that every form of energy received substantial Federal help: oil, gas, coal, nuclear, you name it. When they were emerging technologies, they received substantial help.

Senator SANDERS. But not only when they were emerging, I would agree with that, but they are still receiving help.

Secretary CHU. In some cases, that is correct.

Senator SANDERS. For example, I find it somewhat ironic that some of my friends on this committee express their distaste for loan guarantees and then tell us they want to build another 100 or 200 nuclear power plants in this country, which I—give me your opinion—would not take place at all. You will not build one nuclear plant without Federal loan guarantees. Is that a fair statement?

Secretary CHU. Actually that may not be a fair statement, but let me go back to the original thing that I think you were driving at.

You know, after we subsidize emerging technology and it seems to be very successful on its own, there is a good case that can be made that this technology, this industry, may not need Federal support. Certainly we think that renewable energy will. There will come a day, I do not know whether it is going to be this decade or within a decade and a half, but it is not 30 years from today. The levelized cost of renewable energy will be the same as any new form of energy. It will be as competitive.

But until that day arrives, whether it is, you know, in this decade or the next decade and a half, yes, it could use a little bit more support, but you can sunset that. When there are industries that are doing quite well, we can also ask ourselves, do they need continued support?

Senator SANDERS. Mr. Secretary, there is a new plant being proposed, the Georgia nuclear power plant. How much Federal loan guarantees are involved in that plant?

Secretary CHU. There is one—there is a Vogtle power plant——

Senator SANDERS. Right.

Secretary CHU. That is the one you are talking about, I think, that is a consortium of companies led by Southern. I believe the loan is a conditional commitment. The loan guarantee is about $8.3 billion.

Senator SANDERS. Loan guarantee of $8.3 billion?

Secretary CHU. It is paid for—the credit subsidy is paid for by the applicant, though. So, it is scored by the CBO as a 1 percent score, but the actual credit subsidy is paid by the applicant in that case.

The reason I was hedging on that is I know that there is—before NRC approval, another set of 2 nuclear reactors, which are not applying for a loan. So, sorry, I do not really—I cannot really say definitively.

Senator SANDERS. If the Federal Government—Congress passed legislation repealing Price-Anderson, would the—which is, as you now, a Federal insurance program if, God forbid, there is ever a nuclear accident. Do you think Wall Street would be prepared to invest one penny in nuclear power?

Secretary CHU. I agree with you. I think Price-Anderson is——

Senator SANDERS. My only point. Thank you, Mr. Secretary. Thank you for the excellent work you are doing

My only point on all this is I hear sustainable energy being attacked, and yet you have an entire major industry that people want to greatly expand, for better or for worse, which is totally dependent on the support of the Federal Government, would not last 2 days from now if the Federal Government withdrew all of its support.

OK. I have the chair. Senator Paul.

Senator PAUL. Thank you for coming, Secretary Chu.

Have you met George Kaiser?

Secretary CHU. I think I might have at a roundtable meeting.

Senator PAUL. More than once?

Secretary CHU. The only one I can recall at the time was during a roundtable meeting, yes.

Senator PAUL. Are you concerned about the propriety of giving money, $500 million, to a billionaire, you know, and then sort of changing the rules some so he gets to, you know, maybe get a better deal than taxpayers do?

Secretary CHU. I am convinced—nothing I have seen in the Loan Program or anything in the White House had any connection George Kaiser with raising of money, had anything to do with the selection of loan.

As you well know, Solyndra was at the head of the line picked by the Department of Energy under a previous Administration, and

it was the one that career people advanced forward as the one that had the most work done on that loan, that satisfied the conditions of the intent of the loan.

Senator PAUL. That is sort of troubling, though, that they were the best case scenario and had met all the criteria best, and then they went bankruptcy.

But also I think what is troubling to most of us is that we have given $500 million loans to a guy who is a billionaire. Why in the world would we do that?

Secretary CHU. There were other investors in Solyndra, also very wealthy people, also, but associated with the Republican Party. So, again——

Senator PAUL. I would not give it to them either.

Secretary CHU. The politics of the investors was not part of the decision of whether to give a loan to Solyndra.

Senator PAUL. Do you think there is a question of propriety, though, when you have got someone who works for you, who is married to somebody who works for Solyndra, who you say there is this firewall at the beginning maybe, but you are not insinuating that he never wrote e-mails and never corresponded with people in favor of Solyndra.

Secretary CHU. For example——

Senator PAUL. He did, correct?

Secretary CHU. He was corresponding after the loan was approved for the timing.

Senator PAUL. Do you think that is appropriate for him to be involved at any stage, not just as—to say he was not involved in the beginning is a little bit of an excuse for him, but he should have never, ever had—the word "Solyndra" should have never left his lips and never been in any writing. I think it was.

Secretary CHU. The Department of Energy has very rigorous standards that we enforce on any potential conflict. As you mentioned it, for example, his wife was actually firewalled from having to do any business with Solyndra as well.

Senator PAUL. Have you met Robert Kennedy, Junior?

Secretary CHU. Probably. I am not sure.

Senator PAUL. Do you recall how many times?

Secretary CHU. Since I am not sure——

Senator PAUL. Are you aware of the Kennedy family fortune, that they are pretty wealthy also, probably worth hundreds of millions of dollars, and we gave Robert Kennedy, Junior's company $1.8 billion? Are you aware that someone works for you who used to work for the Kennedys who people say was involved with that loan process?

Secretary CHU. I am not aware of that.

Senator PAUL. I think that is something we need to look into as well, and this suggestion will go on with the hearings in the House as well, that really this revolving door from big business into the Department of Energy to get large loans—$1.8 billion is a lot of money given, once again, to a large campaign contributor of the President's.

It looks unseemingly, and I do not think that is your background, but unfortunately you are the head of this organization that has

been giving these loans to very wealthy people who are donors of the President's. It looks really bad.

Do you give loans to foreign companies?

Secretary CHU. We give loans for companies meant to manufacture in the United States.

Senator PAUL. What about Fisker Karma? Are they spending any of our money in Finland?

Secretary CHU. We gave a loan that was to a design group in Los Angeles, and there is another traunch of the loan if they satisfy the covenants of the loan, which would go to manufacturing in the United States. So, the money we give in loans is very targeted to job creation.

Senator PAUL. My understanding is they were struggling here and that this money was actually going to be used in Finland.

Secretary CHU. As I said before, the loans we give are for American jobs, and we are very clear about that. So, if they—you know, if it is a designer——

Senator PAUL. No money goes to Finland then. Fisker Karma is not allowed to use any of that money in Finland?

Secretary CHU. As I said, we give loans for jobs in America, and we are very clear about that.

Senator PAUL. So, Fisker Karma is not using any U.S. taxpayer dollars in Finland.

Secretary CHU. I can get back to you on the details on that, but I know the overall scope of the loan is for manufacturing in the United States and for design, and it went to a design group.

Senator PAUL. You can see our concern, the whole idea of picking winners and losers. People are saying that windmills, which have been subsidized for years and years now, that even though we have paid for the windmills, we have got them up, we have got them started, if you take away the subsidies, they will never make a profit. They just are not profitable. Talk about tilting at windmills. We are just throwing money at windmills, and I just do not see the purpose.

It really gets down fundamentally to what Senator Lee has talked about. We should not be in this business at all. The thing is, is you are choosing, you know, $50 light bulbs. Nobody understands that in America. There is a real problem here, and I do not think you are going to win the perception war on this. My counseling and advice to you would be, let us get out of this business. Let us not be involved with stuff like this.

Also, the thing is, is by your involvement in it, it really looks unseemingly. I do not question your character. You are known for being an upright person from academia. I mean, but the thing is you are overseeing something that really does not pass the smell test.

Thank you.

Senator FRANKEN. [Presiding] Thank you, Senator. Senator Sanders now has to go and vote. I just voted, and Senator Paul, you do not have to vote if you do not want to. You got to try to, you know, play all the percentages here.

Thank you, Mr. Secretary. I wanted to ask a little bit about just our competition in the world on these technologies. I think it is

really important that we keep pace and do not fall behind China, and India, and Europe.

Just as I was listening to other questions in this and the other panel, I was thinking of all of the above. I know the President gets criticized sometimes when, say, for example, he may not approve of offshore drilling everywhere. When they say, well, what about all the above? My feeling is, like, all off the above does not mean all of all of the above.

But if it does mean all of all the above, certainly it means innovation, and it means—which means R&D, like ARPA–E, which is basic—which is patterned after DARPA, which created the Internet, which I believe—and tell me if I am wrong—has created some jobs.

Secretary CHU. I think you are right.

Senator FRANKEN. Thank you for that validation.

It also includes what Mr. Allison referred to as investment so that we do not have the valley of death for all these things that are discovered at universities and where we have had some investment by the Federal Government, but to commercialize it. That seems to me what the loan program is about.

Secretary CHU. That is correct. I think it has been mischaracterized inappropriately as the government being a venture capitalist. Venture capitalists deal with small amounts of money, at a much earlier stage. The valley of death goes to beginning to deploy a commercial scale where a large investment of capital is needed. When these loan programs were set up in ePACT 2005, in 2007, and then authorized—a lot of them authorized, especially the end of 2008 and beyond, the credit markets froze.

This is why many countries have some sort of financial bank of their own to allow their industries to grow. China has a very large—I think a credit line for 1 year is $34 billion, in renewable energy and things of that nature. Netherlands, Germany, England, they are all looking—many of these countries have these type of programs because——

Senator FRANKEN. Are they not simply looking at the future, and not the far future, but the near future in terms of the competitive world global environment, in terms of these technologies, because we know this is where we are going.

Secretary CHU. Yes. That is why they are doing this. They want their industries in their countries to be advantaged relative to other countries that—you know, if all the countries said we will not have any sort of government financing in any country, that would be one thing. But if a large number of countries are going forward and doing this, the question we should ask ourselves in the United States, what should we be doing?

Senator FRANKEN. So, we want to be competitive in these technologies, which are clearly going to be an enormous part of our economy, and of the world economy, and the world energy economy, right?

Secretary CHU. Right.

Senator FRANKEN. It is kind of ignoring that, to me, seems almost willful in not understanding where the world is going.

Secretary CHU. Yes.

Senator FRANKEN. I do not mean to be harsh, but would you agree with me?

Secretary CHU. I would phrase it slightly differently. If you look at a way of financing as a way of stimulating private sector investment, which is what we ultimately want to do, a loan program, such as the one we are administering, most people agree was stimulating private sector investment at a 10 to 1 ratio. This is a good thing, and that the losses expected from this investment are far less, we think, and Allison also reaffirms this, than what was authorized.

Senator FRANKEN. Right.

Secretary CHU. So, in the aggregate, while there—you know, nobody wants a failure. In the aggregate, it has been very good at stimulating private sector investment and success.

Senator FRANKEN. My time has run out, but I am now the chairman, so I yielded my time.

Solyndra, we must keep in mind, was 3.3 percent—only 3.3 percent of the entire 1705 program. Look, there are risks. We had one senator on the other—my friend and colleague on the other side say about the loan program, if the risk is manageable for this company we are lending money to, we should not be putting tax dollars at risk. They said if the risk is not manageable, we should not be putting tax dollars at risk. So, in other words, we should never put tax dollars at risk according to my colleague.

Now, he has signed on to all of the above. He has said that he is for all the above. So, I would—you know, I would suggest that anyone who is for all of the above and who is not for loan programs is not really for all of the above.

So, I would caution them when they, you know, when the President is not opening every, you know, every square mile of the Continental Shelf to offshore drilling, that the criticism that he is being a hypocrite because he signed on to all of the above, they should be a little bit careful in that regard.

How much—OK, you said China is doing $36 billion?

Secretary CHU. They have offered lines of credit, as I understand it, $34 billion in lines of credit to the renewable or the clean energy sector.

Senator FRANKEN. OK. I think it is absolutely crucial for all kinds of reasons that we invest in clean and renewable energy for obvious reasons, for economic reasons, for climate reasons. I also—when I hear about the $50 light bulb and the award given for that technology, I think of what laptops were when the first laptop came out. I mean, essentially we are talking about mainframes, what the cost of a mainframe was compared to now everybody who can get a laptop gets a laptop.

That is what that is about, right? That $50 light bulb that is, oh, are you expecting every American to put, you know, spend $2,000 a year on light bulbs or whatever that question was, strikes me as just disingenuous, or, either that or not understanding what the purpose of developing that kind of technology is.

So, let us assume it is the latter, shall we? Can you explain again about the $50 light bulb and places where it is already being used and already saving money, that technology?

Secretary CHU. Sure. The LEDs, because they last so long—10,000 hours—if you are in a place which leaves these bulbs on a long time like an exit sign—you know, an emergency exit sign, sometimes an office building because they are left on for 8, 10 hours, and there are very high ceilings. So, you would have to hire someone with a crane to go up there and change that light bulb. Traffic lights, another good example. They are on all the time. In those instances, we already know that switching out incandescent light bulbs for LEDs make commercial sense today.

The idea of that light bulb contest was to provide for a goal going further down to get a light bulb that eventually Americans can afford. You know, no one expects to pay $60 for a light bulb. Quite candidly, you know, if you fill your house with light bulbs like that, given that they last that long, they should be part of your will.

Senator FRANKEN. I think we will end on that. I just wish that when we do these hearings that we did them with the purpose of getting the most understanding of what we are doing——

Secretary CHU. Yes.

Senator FRANKEN [continuing]. Both from a broad level and, as I asked Mr. Allison a very specific thing about the loan subsidies. I think that is the best use of these hearings. I thank you, Mr. Secretary, for the tremendous job you are doing.

Secretary CHU. Right. Thank you. As I said, our goal is to get that to a $5 light bulb that lasts 20,000 hours. Then you buy this—or even 10,000 hours.

Senator FRANKEN. You know, for street lights that should be on in certain neighborhoods because for safety. It can reduce crime.

Secretary CHU. Right.

Senator FRANKEN. There's all kinds of reasons for that.

Mr. Secretary, thank you. I assume that the record will stay open for—I am making this up now—a week.

But the hearing is adjourned.

Secretary CHU. Thank you.

[Whereupon, at 3:12 p.m., the hearing was adjourned.]

APPENDIXES

APPENDIX I

Responses to Additional Questions

RESPONSES OF SECRETARY STEVEN CHU TO QUESTIONS FROM SENATOR MURKOWSKI

MEASURING PERFORMANCE AT THE LOAN PROGRAMS OFFICE

Question 1. I'm interested in your perspective on how performance is measured and priorities established within the Loan Programs Office. Mr. Allison's report states that, "DOE should better define the desired balance between policy goals and financial goals." This seems like a pretty basic managerial function, so I was surprised to hear that Mr. Allison felt it was lacking.

Do you have any plans to develop a more formal process for establishing goals in the loan program and measuring their attainment?

Answer. DOE constantly strives to improve the efficiency and effectiveness of its underwriting and monitoring processes. Clearer goals have been established at the division level and assist senior management in driving those elements of the process that DOE can control. While known policy directives are shared with division managers and incorporated into everyday processes, certain policy matters may arise later in the underwriting process or after a transaction has closed. In those cases, senior LPO management will interact with senior DOE management to resolve any matters where policy concerns impact the underwriting or monitoring of a transaction. Those decisions are then communicated to the deal teams and incorporated in the structuring and monitoring of each transaction.

IMPORTANCE OF REAL-TIME CONTROLS TO MANAGE RISK

[REFERENCES ATTACHED CHART]

Question 2. Mr. Allison has talked about the importance of 'real-time controls' to make sure that risks are properly managed. On that point, market trends associated with the raw materials needed for solar panels are relevant.

Answer. The majority of solar panels require polysilicon, but Solyndra's did not. As a result, when polysilicon prices rose in 2005, it created what the Congressional Research Service has called "a strong economic value proposition" for Solyndra. But then polysilicon dropped precipitously.

This speaks directly to the issue of real-time controls that Mr. Allison has raised.

The Department's official response to Solyndra's bankruptcy was that it resulted from a "totally unexpected" change in the market. At a hearing in November of last year, you also said that your decision to guarantee a loan to Solyndra was "based on the analysis of experienced professionals and on the strength of the information they had available to them at the time." But, as you can see from this chart,* the competitive advantage bestowed upon Solyndra by high polysilicon prices had disappeared several months before DOE closed on their loan guarantee.

Question 2a. Were you or the advisors you rely upon aware of this information at the time the guarantee was issued?

Answer. As part of its due diligence prior to issuing the Solyndra loan guarantee, the Department relied on an Independent Market Consultant's Report Solyndra Fab 2 Manufacturing Facility, by R.W.Beck, dated April 4, 2009. The Department commissioned additional market research from Navigant Consulting, which produced

* Chart has been retained in committee files.

the report Independent Market Advisory Services, DOE Loan Program, Solyndra, Inc., dated February 22, 2010.

Based on the market research and the Department's other due diligence, it was confident in Solyndra's ability to compete in the marketplace at the time of financial close. This confidence was shared by the private sector, as evidenced by private equity's significant investments in Solyndra both before and after the issuance of the loan guarantee.

It is important to note that polysilicon pricing is only one driver of photovoltaic (PV) panel prices. PV module prices are also significantly driven by a supply and demand. From the time that the Solyndra loan guarantee closed until the bankruptcy, the market shifted from supply constrained to oversupplied. While Solyndra was able to significantly reduce costs, ultimately it was unable to keep pace with the dramatic margin compression that was occurring throughout the industry. In addition, market events such as the China Development Bank's available lines of credit to six Chinese PV manufactures (in 2010), negative margins, the bankruptcy of the world's largest PV cell manufacturer (Q-cells), and cuts in the European Union's PV subsidies below retail pricing, were largely unexpected across all major PV forecasting groups.

Question 2b. If so, why did you close on the loan guarantee? And if not, would you agree that this underscores Mr. Allison's point about the need for real-time controls to mitigate risk?

Answer. As indicated in A2a, the Department was confident in Solyndra's ability to compete in the marketplace at the time of financial close. The Department does agree with Mr. Allison's point and believes that it has a robust system of controls and risk mitigation strategies in place.

CHANGING INTERPRETATIONS OF STATUTORY AUTHORITIES

Question 3. You revised the loan guarantee program's rules shortly after taking office, including a re-interpretation of who may have a first lien on the assets of a project that has received a loan guarantee. Specifically, your rulemaking allowed two new financing arrangements:

One is called tenancy in common, where "each owner holds an undivided interest in the physical project assets, and each owner typically finances its investment in the projects separately." In such a case, the rule states that "it may not be feasible to obtain a lien on all project assets."

The other financing arrangement discussed is called pari-passu, where sources of financing other than the Department of Energy—such as foreign Export Credit Agencies participating as co-lenders or co-guarantors—may expect to share in "collateral pledged to secure the borrower's debt obligations."

These examples are a far cry from what happened with Solyndra, but the Department has cited the rule as justification for subordinating taxpayers to the private investors of $75 million. Nowhere in the rule is the scenario of a firm nearing bankruptcy and incapable of raising additional capital unless the Department subordinates itself contemplated. And yet, that's exactly what was allowed to happen. That required a very broad—and in my view, inconsistent—read of what's permitted under even your own rulemaking. So I'd like to know whose legal opinion relied upon to make that interpretation.

Was it DOE's General Counsel, the Department of Justice, or some combination of offices? Who said it was legally permissible to subordinate taxpayers to private investors, and should you have sought—or did you seek—a second opinion?

What is the Department's current position on the subordination of taxpayers to private investors?

Answer. Before agreeing to the restructuring of the Solyndra loan, the Department undertook a thorough legal analysis of the provisions of Title XVII of the Energy Policy Act of 2005 (EPAct 2005), and concluded that subordination in the context of the Solyndra restructuring was permitted under the statute. This analysis was conducted by career legal professionals in both the Loan Programs Office and the Office of General Counsel and was approved by the General Counsel. It was also reviewed by DOE's outside counsel, the law firm of Morrison & Foerster, which found the analysis reasonable. The analysis also was discussed with and reviewed by lawyers in the Office of Management and Budget's (OMB) Office of General Counsel. OMB did not express to DOE any disagreement with the analysis. We also note that, on November 10, 2011, Mary Anne Sullivan, a partner in the law firm of Hogan Lovells, wrote in a letter to the Ranking Member of the Committee on Energy and Commerce, U.S. House of Representatives, that DOE's analysis Is supported by the statute and by DOE's interpretation of the statute as reflected in 10 C.F.R. Part 609, the regulations governing the loan guarantee program...." As Ms.

Sullivan observed, the regulation, like the statute, treats the subordination requirement purely as a condition precedent to the issuance of a loan guarantee, and nothing in the regulation precludes subordination in this context.

The Department has not changed its position on the legality of subordination in the context of the Solyndra restructuring.

SELF-PAID VS. APPROPRIATED CREDIT SUBSIDY COSTS

Question 4. At a clean-energy forum hosted by the Washington Post last year, you stated that "we can design a program that is actually self-paid and still stimulate the most innovative industries." I was particularly interested in your reference to a self-paid program, which is not what the stimulus bill's Section 1705 loan guarantees relied upon. As you know, those loan guarantee applicants were granted access to $6 billion appropriated to cover their credit subsidy costs.

Answer. I believe we can design a program to take advantage of benefits from authorities and appropriations that allow it to borrow at a lower cost than private sector lenders. These might include the right to borrow at low cost from the Treasury and the option to raise more capital through bonding authority. It would also ideally include a substantial initial appropriation, potentially funded in part by transferring Title 17 authorities and unobligated balances to the program.

The program could leverage this federal support to attract private sector co-investors for manufacturing facilities, deployment projects, or generating assets. It would operate with considerable autonomy subject to overall portfolio risk management rules such as limits on total Treasury borrowing and requirements for sound underwriting for each deal.

With this initial appropriation, the program should be self-sustaining for a substantial period, roughly ten years. To support itself, it can collect fees for financing and services, and it will charge a premium to its rate of borrowing from Treasury. Moreover, it may securitize its debt to investors in the private sector, replenishing the capital available to finance additional projects. Ideally, the program should be set up for reauthorization no later than twenty years in the future given the likelihood that market conditions will evolve dramatically in that time frame.

Question 4a. In hindsight, do you believe that credit subsidy costs should be self-paid?

Answer. The economics of the projects completed under §1705 were such that imposing a self-pay credit subsidy would almost certainly have made them uneconomic, particularly in the credit environment that existed at the time that Congress appropriated the credit subsidy funding for §1705.

In FY 2012-2013, the Loan Guarantee Program will focus on portfolio management and monitoring activities on the existing portfolio as well as originating new loan guarantees to utilize remaining self-pay loan authority in the nuclear power, front-end nuclear, fossil, and renewable and energy efficiency sectors as well as the $170 million appropriated credit subsidy for renewable and energy efficiency projects.

Question 4b. Do you think it was wise to appropriate $6 billion in the stimulus to pay for applicants' credit subsidy costs?

Answer. The original appropriation of $6 billion to pay for applicants' credit subsidy was ultimately reduced to $2.5 billion after subsequent rescissions. However, I do believe the significant amount of appropriated credit subsidy was appropriate, particularly given the aforementioned market dynamics, to achieve the goals set by Congress in establishing Title XVII of EPAct 2005. In hindsight, the number of creditworthy projects that could be completed was limited given the September 30, 2011 expiration date for the §1705 program. It was nonetheless important to signal to the marketplace that these projects were a priority for Congress, and that Congress recognized the inherent difficulty for clean energy projects (particularly innovative projects) to attract private capital.

Question 4c. How would you design a self-paid loan guarantee program?

Answer. Please see the answer to Q4 above.

ADHERENCE TO STATUTORY TERMS AND CONDITIONS

Question 5. Much attention has been paid to the terms and conditions for loan guarantees from the 2005 energy bill. Specifically, the question of a "reasonable prospect of repayment" is one that you have faced given Solyndra and Beacon's failures to repay their loans.

Another provision of law requires that "No guarantee shall be made unless the Secretary determines that the amount of the obligation [when combined with other funds] will be sufficient to carry out the project." For Solyndra, this condition was

not adhered to. Another $75 million had to come in from private investors, and to make that happen DOE put taxpayers second in line during bankruptcy.

Did you make a determination that the amounts available when the loan guarantee was closed were sufficient to carry out the Solyndra project and, if so, how do you square that with the fact that they weren't?

Answer. Professional employees of, and advisors to, the Loan Programs Office spend up to a year or more underwriting loan guarantees issued under Title XVII of EPAct 2005. In the course of this analysis, and the structuring of the loan, significant attention is paid to the ability of the borrower to repay the loan and to complete the project. Further, the credit subsidy cost estimate reflects that even with a reasonable prospect of repayment, there is still some risk of default. To ensure adequate funding for completion, the construction budget always includes a reserve for contingencies.

While DOE ultimately makes the statutory determination that there is a reasonable prospect of repayment and that the project funding is sufficient to complete the project (as was the case for Solyndra and Beacon), the determination is necessarily grounded in the analysis and recommendation of the experienced professionals in the Loan Programs Office.

It is important to bear in mind that Congress wisely crafted the two statutory requirements that you cite as determinations that must be made before the Department issues a loan guarantee. They are not continuing covenants, and a change in circumstances that results in shortfalls, either in repayment or in the construction budget, does not mean that the statute was "not adhered to." As has been widely discussed and reported, the difficulties encountered by both Solyndra and Beacon resulted from dramatic changes in the relevant markets that were not anticipated at the time the loan guarantees were issued. Moreover, at the time of the Beacon bankruptcy filing, the Stephentown project was virtually complete, in operation and producing revenue. Similarly, Solyndra faced a shortfall in cash because market conditions had resulted in less robust revenues than had been forecast.

ATVM PROGRAM

Question 6a. Five loans have been issued under the ATVM program in roughly three and a half years, including just one since March 2011. More than half of the program's credit subsidy is unused today, despite initial claims that the program was 'oversubscribed' and statements from DOE that more loans were being negotiated and on the verge of closing. Many are wondering what, exactly, is happening with this program.

How many applications has DOE received under the ATVM program, and how much total loan funding have those applications sought?

Answer. We have received a total of 141 document submissions, 70 of which were deemed as Substantially Complete Applications. Total funding requested was in excess of available appropriations authority for the program. Requested funding data is based purely on application materials received by DOE. A substantial portion of requested funding was related to incomplete applications, and requested funding does not reflect rejected or withdrawn applications or any adjustments based on terms acceptable to the program.

Question 6b. How many ATVM applications are currently being negotiated by DOE?

Answer. We have a total of 27 open document submissions, 17 of which are deemed as Substantially Complete Applications. Of these 17, 11 applicants have not responded to the program for an extended period of time and are considered inactive, while the remaining 6 applications are under review.

Note that application submissions are first reviewed for completeness, prior to any due diligence being performed. Once a company has provided all the required information, the application is deemed "Substantially Complete" and the review process can begin. An application becoming Substantially Complete does not necessarily indicate that an applicant's business plan, technology, market strategy or financial position are fully viable, or that they will meet all criteria necessary to obtain a DOE loan. It is simply the first step in a thorough technical, legal, and financial analysis.

Question 6c. Last summer, 18 projects were reportedly negotiating under ATVM for a total of $9.8 billion in loans. How many of those projects are still negotiating for loans, and what would those loans total?

Answer. Of the 18 Substantially Complete Applications that existed in the summer of 2011, the ATVM has 17 eligible applicants remaining, 11 of which are inactive while the remaining 6 applications are under review.

Question 6d. How many ATVM applications have been rejected by DOE to date?

Answer. We have received a total of 141 document submissions, 70 of which were deemed as Substantially Complete Applications. Of the 70 Substantially Complete Applications, 48 have either been rejected or withdrawn.

Question 6e. What are the primary factors that are preventing DOE from issuing loans through the ATVM program? Is it administrative hurdles that cannot be overcome, a lack of viable projects, or other factors?

Answer. The ATVM Loan Program is a direct loan program, funded by the U.S. Treasury, using taxpayer dollars. The Program takes very seriously its responsibility to ensure that such dollars are awarded in the most appropriate way to protect the taxpayer's interests. That said, the program has entered into loan agreements with five borrowers and continues to closely monitor those loan transactions, insisting on the completion of milestones and fulfillment of any conditions agreed to by the applicant and DOE.

The ATVM and its staff endeavor to maintain openness and transparency with all constituents, including the detailed and timely response to inquiries from interested parties across the public and private sectors. The ATVM understands that its work has the ability to effect a large economic impact across a broad geographic area of the United States, including areas that have been negatively impacted during the recent economic downturn. Despite a significant increase over time in the volume of outside inquiry into ATVM, the program continues to work independently with a distinct focus on our core competencies relating to the review, analysis, negotiation and structuring of loan transactions.

The program was established to offer a low-cost funding opportunity for financially viable companies with technically meritorious projects that are ready for commercialization. Early stage companies (which are the vast majority of applicants) face many challenges in their efforts to obtain a DOE loan. From the financial and credit risks inherent in taking on significant senior debt at an early stage in a company's lifecycle, the quality and experience of the management team, to the technical and execution risks in designing, developing and establishing a manufacturing facility, to the market risk of expected penetration and sales volumes, applicants must carefully consider all aspects of their business plan. These are the same risks analyzed by equity investors, who may or may not be identified in the initial application. To that end, equity investors must be identified, ideally prior to the issuance of a Conditional Commitment Letter, as is the practice in the market for commercial loans. ATVM understands that these equity investors are evaluating the high degree of risks these business plans face, and to achieve an equity return hurdle commensurate with such risk, often require a high degree of financial leverage. The statutory maximum leverage is 80% against eligible costs, and ATVM seeks to strike a balance between the equity return needed to attract investors and the appropriate amount of debt that can be supported by the project.

Automotive component suppliers have also had difficulty qualifying for ATVM loans. Although these automotive suppliers are potentially some of the more credit worthy borrowers within the automotive industry, they have found it difficult to provide a direct connection between their components and qualified advanced technology vehicles, a necessary link to establish eligibility and market acceptance.

Question 6f. How many ATVM loans does DOE anticipate finalizing during Fiscal Year 2013?

Answer. Beyond the several applications currently in the ATVM pipeline, which are always subject to further review and analysis, the ability of the program to "finalize" loans is entirely dependent on the quality of applications received, whether new or existing, and the ability of the DOE and an applicant to reach loan terms agreeable to each side consistent with the statute. It is DOE's goal to advance the state of automotive technologies while minimizing the risk to the taxpayer. This requires that DOE balance its mission of fuel efficiency and against financial, market, technical and legal risks that may threaten the applicants' ability to repay the loan. To the extent that the ATVM Loan Program, in its independent analysis, determines that any or all of the applicants will not achieve loan funding, we endeavor to provide clear feedback to the applicant.

VACANCIES

Question 7a. According to Mr. Allison's report, some positions in LPO are either vacant or staffed by acting heads and rely heavily on consultants and contractors."

Which positions are currently vacant in the LPO? Which are staffed by acting heads?

Answer. The current LPO organizational model and staffing plan approved in December 2010 by the Secretary, the DOE Human Capital Officer (HC), and the collective bargaining unit allows for the recruitment and retention of federal employees

compliant with Office of Personnel Management (OPM) requirements. Accordingly, the LPO mission and functions are aligned to the staffing plan which: establishes the roles and responsibilities for all new federal supervisors and staff; identifies their reporting structure, authorities, job classifications, and grade levels; and provides the framework for recruitment actions, which the LPO is undertaking in earnest with the HC organization.

The LPO organization is headed by the Executive Director (LP-1) who reports directly to the Secretary of Energy, and it has seven Divisions reporting to LP-1 including the:

(1) Loan Guarantee Origination Division (LP-10) which manages all aspects of application intake, project evaluations, due diligence, environmental compliance, and origination and underwriting for all projects submitted under Title XVII loan guarantee authority;

(2) Advanced Technology Vehicle Manufacturing (ATVM) Division (LP-20) which manages all aspects of ATVM loan origination for projects submitted under EISA Section 136 direct loan authority;

(3) Technical and Project Management Division (LP-30) which evaluates the technical, scientific, and engineering eligibility and viability of all Title XVII and ATVM projects;

(4) Credit Division (LP-40) which manages credit modeling, credit calculations, and risk analysis, Credit Committee, Credit Review Board, and interagency risk assessments and management for Title XVII and ATVM projects;

(5) Portfolio Management Division (LP-50) which provides portfolio monitoring and reporting, loan disbursement and repayment administration; and special assets management for Title XVII and ATVM projects.

(6) Management Operations Division (LP-60) which provides liaison, reporting, compliance, implementation, and management of the federal budget, contracts, personnel, information systems, correspondence, external communications, audits, safety, and security requirements for the LPO;

(7) Legal Division (LP-70) which reports to the DOE General Counsel and provides legal expertise on all transactions and loan agreements for Title XVII and ATVM projects.

The LPO staffing plan allows each Division to have a Director at the Senior Executive Service (or equivalent) level to establish, manage, and oversee LPO policy, procedures, and operations in coordination with LP-1. Currently there are three managers serving in an "Acting" capacity who function in "dual-hat" SES roles. They are: the Acting LP-1, who also serves as the LP-10 Director; the Acting LP-20 Director, who also serves as a Supervisory Senior Investment Officer; and the Acting LP-60 Director, who is also the Director for LPO Strategic Initiatives.

The LP-40 Director position that was mentioned in Mr. Allison's report is currently vacant. This position was advertised in January 2011 through a public notice on USAJobs, which is the OPM official federal job vacancy website. After a six-month recruitment effort, the competitive advertisement yielded no qualified candidates for this position. This was likely due, in large part, to uncertainly surrounding the pending expiration of the LPO's Recovery Act authority. Since Mr. Allison's report was issued, the LPO has undertaken to revise this announcement to incorporate additional risk management functions identified in the report and is pursuing multiple notification strategies to advertise again for this position.

Question 7b. What is your plan, if any, to fill these positions?

Answer. The LPO is engaging in the recruitment for the LP-40 position under a revised framework. In addition, DOE is currently extending offers to eight new loan professionals for asset management and supervision in LP-50. At the same time, the LPO has initiated recruitment actions for specialists in loan administration, special assets, investment and financial analysis.

As a federal executive agency governed by Title V of the U.S. Code, Government Organization and Employees, the LPO adheres to OPM and DOE personnel regulations that require competitive public postings for all federal vacancies. As a new organization, LPO recruitments have required significant advance work to create new federal positions in the specialized job series—for investment officers and loan specialists with corporate and project finance qualifications—which were not previously available at DOE. Combined with the timeframe required for OPM announcements, the LPO recruitment actions have typically taken six to eight months. The LPO continues working with the DOE Human Capital Office to determine ways to streamline the federal recruitment process to improve federal hiring for the critical skills it requires. At the same time, LPO is trying to find ways to incentivize federal incumbents with specialized finance skills in a manner that is competitive with other federal finance organizations to ensure program stability and that it has the in-

house competencies needed to meet its mission responsibly. These positions will be posted on USAJobs consistent will federal hiring requirements.

ADDITIONAL SUBSIDY

Question 8a. According to a memo written by administration officials Carol Browner, Ron Klain, and Larry Summers in October 2010, "Project sponsors for all power generation projects under the 1705 program have indicated that they intend to claim a 1603 grant once they enter into service."

How many projects ultimately selected by DOE for Section 1705 loan guarantees have also claimed a 1603 grant (or will be eligible to do so before the 'Placed in Service' and 'Begun Construction' deadlines of October 1, 2012)?

Answer. As you know, the Department of Treasury is responsible for administering the 1603 program and the Investment Tax Credits (ITC). Under the 1705 loan program, the Department of Energy closed 26 transactions, excluding two transactions that withdrew subsequent to closing (POET and AES Energy Storage). Of the 26 transactions, 20 are expected to claim 1603 payments or ITC. The aggregate project cost for the 20 projects is $22.8 billion and the aggregate expected 1603/ITC is $5.9 billion or 26% of the project cost after allowing for ineligible costs.

Question 8b. What is the total government subsidy (federal and state) for Section 1705 loan recipients, including 1603 grants, in dollars? Please provide this on a project-byproject basis and as an average across all projects.

Answer. The Department does not track state-level government subsidy. The Department cannot release the total project costs of specific projects as that is business sensitive information and it cannot report on project specific 1603 data as that program is administered by the Department of Treasury. Currently most projects have not completed the 1603 process and been awarded 1603 payments but when those payments are awarded the payments will be public information and will be reported on the Treasury website.

Question 8c. What is the total government subsidy for Section 1705 loan recipients, including 1603 grants, as a percentage of project cost? Please provide this on a project-byproject basis and as an average across all projects.

Answer. The Department can only report on 1603 grant recipients in terms of total government subsidy, not on a project specific basis although for projects that will be receiving 1603 payments, the information on such payments will be available on the Treasury website once the payment has been issued. The total aggregate expected 1603 award as a percentage of aggregate total project costs of the 26 projects (excluding the two that withdrew subsequent to closing) is 23.3%.

POWER PURCHASE AGREEMENTS AND LIABILITY

Question 9a. A number of Section 1705 loan guarantees rely on power purchase agreements between the project sponsor and a utility.

Have power purchase agreements been signed by all applicable parties (including agencies of the federal government) for all relevant Section 1705 loan guarantee projects? If not, why not, and when do you expect those agreements will be completed?

Answer. PPAs have been executed by all relevant parties for all but one of the Section 1705 energy generation projects. The one exception is Project Amp, which will deliver a PPA executed by all relevant parties before any disbursement occurs. Project Amp is designed to be completed in phases. Approval of a phase (and, therefore, disbursement of loan proceeds in connection with a phase) requires a PPA executed by all relevant parties, including an investment grade utility offtaker.

A PPA, which is an agreement to buy generated power, is not relevant to Section 1705's non-generation projects, as there is no generated power to sell in those projects.

Question 9b. How is potential liability for damage caused to the grid in the event of a plant failure or malfunction addressed in power purchase agreements?

Answer. Measures designed to protect interconnecting high voltage transmission systems (i.e., "the grid") from power plant failures or malfunctions are generally addressed in interconnection agreements (rather than in Power Purchase Agreements) between the power plant's owner (the "Interconnection Customer"), the owner of the transmission facilities (the "'Transmitting Organization") and the independent Regional Transmission Organization ("RTO"). As these are fairly standardized agreements, the information below is based on representative interconnection agreements from the California Independent System Operator ("CAISO") and ISO New England ("ISO-NE").

Grid protective measures are more a technical issue than a legal one, as system technical standards are designed to prevent any power plant from causing damage

to the grid. These standards are imposed legally by the interconnection agreement requirement that the Interconnection Customer design, construct and operate the power plant and appurtenant facilities in accordance with the applicable Reliability Council's requirements and "good utility practice." Each Interconnection Customer is, therefore, required to install and maintain protective equipment designed to prevent interference with, and damage to, the interconnected transmission facilities, as specified by "good utility practice" and the Transmitting Organization's standards. Before the in-service date and commercial operation of the power plant, the Transmitting Organization and Interconnection Customer are also required to perform complete calibration and function tests on the system protection facilities to ensure compliance with the specified standards.

In the event of emergency conditions, the RTO is separately authorized by the interconnection agreement to shut down transmission from the power plant without notice and to take any other actions to preserve public health and safety, preserve the reliability of the RTO-controlled grid or the Transmitting Organization's interconnection facilities and distribution system, to limit or prevent damage, and to expedite restoration of service.

From a legal perspective, the interconnection agreements generally provide that the RTO, Transmitting Organization and Interconnection Customer indemnify each other from all losses arising out of another party's actions or inactions under the interconnection agreement, except in cases of gross negligence or intentional wrongdoing by the indemnified party. Liability for consequential, indirect or punitive damages is generally excluded in the interconnection agreements. The Transmitting Organization and Interconnection Customer are also required by the interconnection agreement to maintain minimum insurance coverage, including excess public liability insurance over and above general commercial liability policies.

RESPONSES OF SECRETARY STEVEN CHU TO QUESTIONS FROM SENATOR FRANKEN

Question 1. How many companies whose technologies have received Department of Energy support through grants, public-private partnerships (such as the NP2010 program), loans, or loan guarantees have transferred that technology (i.e., intellectual property or trade secrets) to China in the past ten years?

Answer. The Department of Energy does not centrally collect information about companies that have received DOE support and have transferred that technology to China.

Question 2. Please provide the names of all companies that have at any time over the past ten years transferred technology to China subsequent to Department of Energy support for the technology through grants, public-private partnerships, loans, or loan guarantees.

Answer. The Department of Energy does not centrally collect information about companies that have received DOE support and have transferred that technology to China.

Question 3. Please provide any relevant information on particular support programs that the above-mentioned companies and technologies received.

Answer. The Department of Energy does not centrally collect information about companies that have received DOE support and have transferred that technology to China.

Question 4. Please provide a general description of the technology that was supported by the Department of Energy and subsequently transferred to China.

Answer. The Department of Energy does not centrally collect information about companies that have received DOE support and have transferred that technology to China.

[Responses to the following questions were not received at the time the hearing went to press:]

QUESTIONS FOR SECRETARY STEVEN CHU FROM SENATOR BARRASSO

Question 1. The Department has made over $16 billion in section 1705 loan guarantees. Over 80 percent of these loan guarantees have been made to the solar industry. In other words, about $13 billion in loan guarantees have gone to solar generation companies and solar manufacturing companies, including Solyndra. Why has the solar industry received 80 percent of all section 1705 loan guarantees?

Question 2. Again, the Department has made over $16 billion in section 1705 loan guarantees. However, it is my understanding that the Department has not originated a single section 1703 loan guarantee. As you know, section 1703 was enacted almost 4 years prior to section 1705. Please explain how the Department has been

able to make over $16 billion in section 1705 loan guarantees but not any section 1703 loan guarantees?

Question 3. On March 12, 2012, the Government Accountability Office (GAO) released a report on the Department's loan guarantees. Do you agree with GAO's conclusion that "DOE did not always follow its own process for reviewing applications and documenting its analysis and decisions, potentially increasing the taxpayer's exposure to financial risk from an applicant's default"? If not, why not?

Question 4. I understand that the Department is considering transferring depleted uranium to the Bonneville Power Administration (BPA). The purpose of these transfers appears to be to assist USEC which would enrich the depleted uranium. Please explain in detail what the Department is considering. Please include in your answer: (1) the exact quantities of uranium that would be transferred to BPA; (2) how the depleted uranium would be transferred to BPA and the price BPA would pay for the depleted uranium; and (3) the price BPA would pay USEC per separate work unit to enrich the depleted uranium.

Question 5. Will you please explain how the transfers to BPA and all of the Department's other uranium dispositions would be consistent with the Department's commitment not to dispose of more than 5 million pounds of natural uranium equivalent (or 10 percent of the nation's domestic fuel requirements) annually into the commercial market? Please explain in your answer which years the Department would record the transfers to BPA for the purposes of satisfying the Department's total cap on annual uranium dispositions.

Question 6. How would the Department ensure that the uranium transferred to BPA will remain out of the commercial market prior to consumption? In other words, how would the Department ensure that BPA does not swap, loan, or sell the uranium into the market?

Question 7. What steps would the Department take to ensure that BPA will not sell or trade some of its existing uranium inventories into the commercial market and replace such inventories with the uranium transferred from the Department?

RESPONSES OF HERBERT ALLISON TO QUESTIONS FROM SENATOR MURKOWSKI

THREAT OF CONCENTRATION RISK

Your report goes into some detail about concentration risk in the Energy Department's loan portfolio. Specifically, you cite the large share of projects for manufacturing solar equipment or generating solar power and the reliance upon state and federal mandates to create markets for many projects' and products.

In many ways, this concentration risk is the direct result of a Congressional decision to limit eligibility under the stimulus bill's Section 1705 program. Compared to the 2005 energy bill's Section 1703, a far narrower set of industries—renewable and transmission projects only—were allowed to apply for support under Section 1705 from the Stimulus.

Question 1. Do you think it was wise for Congress to limit eligibility under Sec. 1705, and do you think these concentration risks would be more manageable if nuclear, clean coal, or other projects were also part of the Department's portfolio?

Answer. What the Independent Consultant's Report ("Report") means by the term "concentration risk" in the existing portfolio is that, if one project similar to others in a group were to encounter trouble, the others in that group might also be affected. It is not clear that the existing concentration risks would be diminished by adding projects involving other types of energy production, because they may not offset others in the portfolio and the existing risks would still remain.

CATEGORIES OF RISK AND LESSONS LEARNED

In evaluating the Department's loan and loan guarantee portfolio, you chose to break out the loans and loan guarantees not by programmatic origin, but by certain traits that bear heavily on a project's risk profile. Specifically, you chose to disaggregate the portfolio into "Utility-Linked," "Non-Utility Linked," and the "Ford and Nissan" categories.

In that order, "Ford and Nissan" were found to have a credit subsidy cost of 2%, "Utility-Linked" came in at 13%, and "Non-Utility-Linked"—without accounting for the already-bankrupt Solyndra and Beacon—had a credit subsidy cost of 41%.

Question 2a. Can you explain why you chose to break the portfolio out this way?

Question 2b. Is there a class or category of project that you think should not receive loan guarantees or direct loans from the government in the future?

Answer. As you know, the Independent Consultant's assignment was in part to evaluate the loans in the portfolio. To do so, the Independent Consultant (which

term, as used herein and in the Report, collectively refers to myself and the team of advisers that was assembled to assist in preparing the Report) estimated the risk of each loan, assigned a discount rate appropriate for that risk and then discounted the loan's expected cash flows using the two methods of valuation that we selected: FCRA and FMV. In order to provide as much information as possible about the estimates of expected loss without violating confidentiality agreements, the Independent Consultant grouped the loans into three categories, each with the distinctive risk and other characteristics described in the Report, and disclosed the estimates of expected loss for each category.

The Independent Consultant believes that the answer to the second part of the question would depend on a number of factors, including policy imperatives at the time, analysis of the project by technical experts, the expected economics of the project, and the risks and countervailing protections in the financing agreements.

OTHER TOOLS AVAILABLE TO SUPPORT INNOVATIVE ENERGY TECHNOLOGIES

If our policy objective is to facilitate deployment of new or improved energy technologies, there are many tools available to the government. To this day, we also utilize tax credits, cash grants, mandates, government procurement, prizes, performance standards, and other mechanisms to try and alter the nation's energy mix.

Question 3. Do you think some of these other tools make more sense than loan guarantees or direct loans? If so, can you provide examples of where one tool is clearly preferable to loan guarantees or direct loans?

Answer. As it designs financing programs for energy projects, the government should select forms of financing best suited to accomplishing the desired policy objectives and to protecting the interests of taxpayers. For more innovative, risky projects in early stages of development, it may be advantageous to use grants, prizes or equity investments. Equity-linked vehicles could enable taxpayers to share in returns from successful ventures. Those gains could help to pay down the deficit, offset losses from other investments, or finance other projects. The forms of financing permitted in the Title XVII and ATVM programs expose taxpayers to the downside risk of absorbing considerable losses but do not offer taxpayers the possibility of profiting alongside project sponsors if projects are successful.

CHIEF RISK OFFICER RECOMMENDATION

Question 4. Are market trends related to polysilicon prices—in the context of the loan guarantee to Solyndra—something that a Chief Risk Officer would have been monitoring ahead of the Department issuing a loan guarantee to a company whose competitive advantage was derived, in large part, from the fact that they didn't use polysilicon? (Please reference question #2 to Secretary Chu for more information and a chart from CRS depicting historical polysilicon prices.)

Answer. The Chief Risk Officer would provide the Department with an independent view on markets not only before loans are approved, but also before funds are disbursed and throughout the lives of the loans. In addition, the recommended Early Warning System would provide continuously updated information on markets and developments in technologies for producing and delivering clean energy.

FEE COLLECTIONS

Your report notes (p. 17) that the level of fees charged to borrowers were undermarket and that proceeds from fee collections may not be large enough to cover long-term management and oversight of the project portfolio. As a result, DOE likely needs additional funding to adequately manage the project portfolio over its lifetime.

Question 5. Should the fee structure for applicants/recipients be modified to ensure that the charges are sufficient to cover loan origination, loan monitoring and management, and other long-term administrative costs? If so, what changes to the fee structure would you recommend?

Answer. Under the current laws and regulations governing the Program, most of the fees that fund the Loan Program Office ("LPO") derive from origination of financings. Once the origination phase of the Program ends, fee income will decline substantially and may be insufficient to fund the activities of the LPO over the lives of the loans. DOE cannot unilaterally change the fee structure for existing agreements. Therefore, DOE should modify the fee structure to the extent it is statutorily authorized if it concludes that revenues are likely to be insufficient to fund the LPO over the 20-30 year life of the Program. To the extent such modifications require amendment of the underlying statutory authorities, Congress should make such necessary amendments.

LONG-TERM FUNDING

The first recommendation in your report (p. 43) is to "Provide Long-Term Funding for the Program." Also on page 43, the report states that "adequately funding the management and administration of the Programs will depend on obtaining additional budget and appropriated funds in the future." However, no specific estimate of funding needed for the program is provided.

Question 6. How much funding is needed to adequately manage, monitor, and oversee the loan and loan guarantee project portfolio?

Answer. Determining the amount of funding needed to adequately manage, monitor and oversee the portfolio was not part of the Independent Consultant's assignment. The Report did state, however, that the costs to implement the recommendations should be low compared to risk of added losses if the Programs are not well-managed and governed. Furthermore, many of the Report's recommendations entail little or no cost.

EVALUATION METHOD

Your report evaluates DOE's loan and loan guarantee portfolio using two different methods: (1) Federal Credit Reform Act (FCRA) credit subsidy cost, and (2) Fair Market Value. However, the report emphasizes (pages 33 and 37) that neither method should be relied upon as an accurate predictor of estimated losses or costs to the federal government.

Question 7. Is there an evaluation method available that might reliably predict government costs for energy project loans and loan guarantees such as those currently within DOE's loan and loan guarantee portfolio?

Answer. For purposes of government budgeting, the method set forth in the Federal Credit Reform Act of 1990 ("FCRA") is appropriate, as it estimates credit loss and excludes other costs that are applicable to private investors but not to the government so long as the government holds the loans. Any deviations in the credit subsidy cost will likely be offset by countervailing changes in costs of the government's other loan programs or be absorbed by taxpayers under FCRA's permanent and indefinite authority.

Nonetheless, no method can reliably forecast the actual losses that will ensue over the life of the Programs because any cost to the government will be the product of many factors, some unique to an individual loan, which the FCRA methodology can neither capture nor forecast today. Moreover, the FCRA methodology's present value estimates of cost fluctuate materially with changes in assumed long-term interest rates. The FCRA methodology also assumes that DOE is a passive bystander unable to act to reduce or mitigate risk over time, when in fact it has robust tools to protect itself against elective risk.

NON-UTILITY LINKED LOANS

Your evaluation of the non-utility-linked loans category indicates that credit subsidy cost estimates have increased 71% since the loans were originated (p. 32). This increase is partly a result of six of the eight loans in this category having received lower credit ratings than those assigned by DOE. The non-utility-linked loans category includes loans to cellulosic ethanolprojects, automotive manufacturing companies, and solar manufacturing companies.

Question 8. Could you please explain why six of the non-utility-linked loans received lower credit ratings than ratings assigned by DOE?

Answer. The Non-Utility-Linked Loan projects typically rely on novel technologies and unproven manufacturing methods. They will not benefit from guaranteed purchases of their production and instead will have to sell their products into highly competitive markets. Some have not been meeting progress milestones. In considering these factors, the Independent Consultant assigned lower credit ratings to some of the loans than did DOE.

FMV AND FCRA EVALUATIONS

Your evaluation of projects in the non-utility-linked loans category resulted in FCRA credit subsidy cost estimates and Fair Market Value discounts, which investors would require, that were essentially equal. On page 33 of the report, the following statement is made: "...results from the legally required FCRA Methodology do not reflect the discounts from the loans' face values that investors would demand to bear the full set of risks involved in this particular Portfolio." This statement seems to indicate that FMV discounts would generally be larger than credit subsidy cost estimates. The non-utility-linked loans include the highest-risk projects in the

portfolio, so these projects might be expected to command a significant Fair Market Value discount.

Question 9. For the non-utility-linked loans category, could you please explain why the Independent Consultant's estimates of Fair Market Value (FMV) and FCRA credit subsidy cost are essentially equal?

Answer. The fact that the Independent Consultant's estimates of FMV (measured as a range) and the FCRA credit subsidy cost for the Non-Utility Linked Loans are similar is largely coincidental and is a function of the assumptions used to calculate the estimates using the two methodologies and the individual characteristics of each loan. The Independent Consultant evaluated eight Non-Utility Linked Loans independently. The estimates of FMV and FCRA credit subsidy costs for the Non-Utility Linked Loans presented in the Independent Consultant's Report are aggregate values comprised of the individual estimates for each of the eight Non-Utility Linked Loans. In some cases, the FMV and FCRA credit subsidy costs for individual Non-Utility Linked Loans overlap. In other cases, they do not. Viewed as a portfolio, as the report does, there is overlap.

Although the overlap is largely coincidental, the Independent Consultant, as a general rule, observed less of a disparity between estimates of FMV and FCRA credit subsidy costs, all other factors held constant, for credits on the lower end of the credit scale and for credits for which low recovery-rate-upon-default assumptions were utilized for the FCRA methodology. The Non-Utility Linked Loans tended to be on the lower end of the credit scale and utilized relatively low recovery rates for the FCRA methodology.

TAXPAYER PROTECTIONS

You recommend (p. 45) actions that would protect taxpayer interests. There are references throughout the report that discuss how the loan and loan guarantee programs could increase oversight of projects and transactions and institute more rigorous covenants and conditions prior to funding disbursement. However, once all funds have been fully disbursed, taxpayer protection options may be limited to the ability of the government to operate or liquidate project assets in the event of a default.

Question 10. After loan or loan guarantee funds are completely disbursed to projects, what taxpayer protection options are available to the federal government?

Answer. DOE can claim default if a project does not meet ongoing contractual requirements for capital, cash flow, debt/equity ratios, project performance, spending rates, debt limits, etc. DOE does not have some protections typically available to private lenders, such as the ability to contribute equity, and it may not be authorized to subordinate its loans to attract additional funding that may improve the project's viability and ability to repay DOE.

TIMEFRAME OF REPORT

You mention the 'compressed time period for review' (p. 54) in your discussion of limitations of the report.

Question 11a. Was 60 days sufficient to cover all aspects of the LPO that you believe are worthy of being examined?

Question 11b. Ideally, how much time would be allotted to complete a comprehensive review of the LPO?

Answer. The Independent Consultant had sufficient time to complete the assigned work of evaluating the LPO's portfolio of loans using the available information provided by DOE, making comprehensive recommendations for strengthening management of the Program, and proposing an Early Warning System. As noted in the Report, with additional time the Independent Consultant could have retained outside experts (engineering firms, etc.), but the Independent Consultant is not convinced that such experts would have materially affected the valuations of loans and the recommendations contained in the Report. The Independent Consultant's assignment did not include examining day-to-day operations, record keeping and controls. The Independent Consultant assumes that the DOE Inspector General performs those functions.

APPENDIX II

Additional Material Submitted for the Record

BRIGHT AUTOMOTIVE,
Rochester Hills, MI, December 27, 2011.

SECRETARY STEPHEN CHU,
DEPUTY SECRETARY DANIEL PONEMAN,
MR. OWEN BARWELL,
MR. ROB DONATUCCI,
MR. DAVID FRANTZ,
MR. NICK WHITCOMBE.

Subject: Bright Automotive and its ATVM Loan Program Application

DEAR SECRETARY CHU, DEPUTY SECRETARY PONEMAN AND MESSRS. BARWELL, DONATUCCI, FRANTZ, AND WHITCOMBE:

The purpose of letter is to provide an overview of Bright Automotive, to comprehensively convey its experience as it relates to the ATVMLP over the past three years and to request the DOE's senior leadership's direct and immediate involvement in moving our application forward to completion.

As our experience to date with ATVMLP has been extensive, we want to provide a comprehensive summary of our status and situation. An executive summary is provided, followed by a more comprehensive overview.

EXECUTIVE SUMMARY

Overview of Bright and its ATVM Loan Process

- Bright was spun out of the of a consortium of Google.org, Rocky Mountain Institute, the Turner Foundation, Alcoa, and Johnson Controls in 2007, and incorporated in January of 2008;
- Bright will produce a light-weight road-coupled PHEV commercial work truck in the U.S. that will create over 675 American-based direct and at least 2700 indirect jobs—largely in the Midwest. With an electric-range of over 30 miles and charge-sustaining efficiency of over 35 miles per gallon, each vehicle will save about 40 barrels of oil and reduce CO_2 emissions by 16 tons per year;
- Bright's PHEV is the first truck engineered from the ground up as a plug-in electric vehicle (PEV) designed for commercial and government customers that buy over 900,000 vehicles a year in North America, offering a 10-30% lower "total cost of ownership" than any competitive vehicle in its class;
- The Bright work truck will advance several of the Federal Government's policy goals, most importantly offering an Alternative Fuel Vehicle alternative for its van and pickup applications to help fulfill the government's 2015 pledge to exclusively procure AFV's;
- Bright's projected CAFE number will be over 85-mpg, and its CO_2 will be 102g/mi while having a footprint of over 62-sq ft, offering an example of CAFE standards can be exceeded without having to "downsize" the fleet;
- Bright has developed key partnerships with large, established entities such as General Motors and AM General;
- The ATVM Loan Program was created by the Bush Administration and expanded by the Obama Administration to encourage the creation of fuel-efficient vehicles in the U.S. Bright Automotive will help fulfill this objective, thereby reducing ownership costs for public and private fleet operators, reduce dependencies on foreign energy sources and develop advanced technologies in the U.S.
- Bright's ATVM loan application was deemed "substantially complete" in December 2008 and it has been in the loan approval process since that time;

- In January 2010, senior LPO leadership indicated that if Bright established a strategic partnership with a major OEM, it would greatly speed up its loan approval process.
- Bright established a strategic partnership with General Motors in July-2010, senior LPO leadership indicates a maximum of 2 months to loan approval;
- September 2010, DOE establishes six (6) additional definitive agreements required for CCL. These are achieved by December 2010, covering a technical center lease and various supply, manufacturing and service agreements;
- Due diligence for Bright's loan application establishing technical and market viability was deemed complete in January 2011 and a "near final" CCL was issued to Bright;
- Consideration for Bright's loan application was suspended in May 2011 on the basis of volume projections from IHS Global Insight which were later found to be significantly flawed; a new study was commissioned and completed by AT Kearny in June 2011;
- In June/July 2011, additional loan covenants were added to Bright's loan package;
- In July 2011, DOE senior leadership indicated to Bright the expectation that its loan would be advanced to the interagency process by September 2011 with loan approval following in October 2011;
- ATVM loan applications were deprioritized in September 2011 in favor of Title XVII loan approval activities; further, unfavorable publicity associated with Title XVII and ATVM loan recipients appears to have impacted negatively companies such as Bright that remain in the ATVMLP approval process.
- In December of 2011, the DOE informed Bright that it has completed its credit paper and is awaiting an internal decision on the "purpose of the ATVM program" before advancing the application to OMB.

Broad and Bipartisan Support Exists for Bright

- Bright has received comprehensive incentive packages at the state, county and local levels in both Indiana and Michigan;
- Numerous calls of inquiry and letters of support from Congressional and local leaders have been submitted into the DOE—these are included in the body of the text below; a significant amount of Congressional angst over the ATVMLP can be summarized in the following quote from a Senate legislative director: "perhaps if they'd get more loans out the door they could get some more support from Congress...part of the frustration with the program is the slowness of the process."
- Bright has completed multiple projects for the US Postal Service and Department of Defense—each one on time and under budget—and expects that non-tactical vehicle orders will be forthcoming from the DoD as well as from the GSA;
- Bright has received confirmed orders from customers like Duke Energy and Snap-on Tools, as well as letters of support from firms such as Comcast, Frito Lay and ServiceMaster;
- Bright has secured all of its equity commitments required for its CCL.

Bright's Options

- Bright remains very committed to the prospect of bringing cutting-edge PEV technology to businesses and to the U.S. Government via the ATVMLP, but is unclear as to what will make this a reality;
- Should ATVM loan approval not be forthcoming, Bright will be forced to pursue its business plans outside of the United States to fulfill other market needs;
- Unfortunately, a primary funding path outside of the U.S. will lead to the transfer of jobs, IP and know-how to foreign countries;
- Bright has established a relationship with a (non-government affiliated) Chinese investment firm and has a signed term sheet. Also, a China-based Joint Venture Letter of Intent is being finalized;
- These relationships in China can be pursued with or without the presence of an ATVM loan—in the first scenario, it would be an additive growth and value engine to bolster US developed technology; if the latter, to the detriment of our country, the jobs and technology that Bright would otherwise create will move to China.

DOE Requested Actions

- Bright is requesting a meeting between Bright and all of the recipients of this letter, including, respectfully, Secretary Chu. The purpose will be to discuss the current status of the ATVMLP in general and the specific next steps associated

with Bright's application. As time is critical, this meeting should be targeted for the week of January 2 or 9, 2012.

Bright's application fulfills the intent of the ATVMLP program, and has been derisked with the preconditions, equity requirements, and partnerships incorporated into its lenders case. The current status is having a material impact on our business, thereby forcing us to consider moving our operations overseas. Gaining clarity and transparency from you on next steps is critical.

Your prompt attention to this matter is urgently needed and is appreciated.

Sincerely,

REUBEN MUNGER,
Chairman and CEO.

MIKE DONOUGHE,
Chief Operating Officer.

DETAILS

Bright Automotive Background

I. Created in 2007 by a consortium of the Rocky Mountain Institute, Google, Johnson Controls, the Turner Foundation and Alcoa to explore U.S. business opportunities for PHEV's; initial studies determined that a combination of "platform physics" and a road-coupled hybrid electric architecture focused on the commercial market could create compelling business economics;

II. Incorporated in 2008; created its powertrain center of excellence in Anderson, Indiana;

III. Secured important customer validation in 2008-9, including "voice of the customer" work with over 50 large fleets, securing letters of support to the Secretary from fleets including Cox, Comcast, Best Buy, and order letters from Duke, Vectren, and Snap On. Comcast, Cox and Duke letters follow:*

IV. Delivered Bright IDEA customer prototype in 2009 and began work with the Department of Defense to prove out the merits of the road-coupled PHEV architecture;

V. Delivered DoD PHEV prototype and USPS EV conversion in 2010;

VI. Established a strategic partnership with General Motors in July 2010; GM made initial investment in Bright in August 2010; additional GM investments of $20 million pending—contingent upon receipt of ATVM loan approval;

VII. Established a strategic partnership and contract with Dickenson Fleet Services, the leading commercial-fleet service provider, in the fall of 2010;

VIII. Created a Vehicle Engineering Technical Center in Rochester Hills, Michigan in 2011;

IX. Established a contract assembly contract with AM General in Mishawaka, Indiana—contingent upon receipt of ATVM loan approval;

X. Ready to accelerate program activities to create the IDEA platform—once ATVM loan approval is achieved.

Bright's ATVMLP Timeline

I. December 2008: Bright's ATVM loan application deemed "substantially complete";

II. 2009: loan application processing;

III. September 2009, after rejecting a $450 million loan application, Matt Rogers and Lach Seward indicate that a loan for less than $300 million would be quickly approved. Bright revises its business plan to support a $284 million loan (subsequently increased to $314)

IV. November 2009, DOE decides to redo the various consulting studies on Bright's business; this process did not begin in earnest until January 2010.

V. January 2010: Senior leadership at DOE indicated that if Bright established a strategic partnership with a major OEM, it would greatly speed up its loan approval process, saying the approval would occur in "weeks, not months."

VI. July 2010: Bright and GM sign an MOU and establish a strategic partnership; Senior LPO leadership details a two month timeline to CCL

VII. August 2010: After securing the GM strategic partnership, Bright leadership informs the DOE about potentially problematic volume forecasting done by IHS Global Insight in early 2010 and asked for the analysis to be reassessed (see Item X below);

VIII. September 2010: To enable a speedier loan approval, Bright directed to satisfy six additional pre-conditions:

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*Documents have been retained in committee files.

a) A definitive vehicle maintenance agreement (service provider);
b) Binding commitments for $70 million in equity;
c) A definitive agreement with a U.S. contract manufacturer to assemble the IDEA;
d) A lease for its vehicle engineering technical center;
e) A ICE powertrain supply agreement with General Motors;
f) A supply contract with General Motors for "parts bin" access.

IX. December 2010: Bright meets each pre-condition;
X. January 2011: Due diligence phase completed; Bright receives a "near final" CCL for a $314 million loan;
XI. February—May 2011: Loan application package developed and reviewed with credit team;
XII. May 18, 2011: DOE determines it will no longer actively consider Bright's loan based upon the impact of volume considerations in the DOE-generated lender's case on Bright;. Bright leadership discovers that the early 2010 analysis was never reassessed;
XIII. May 19, 2011: Bright reaches out to political and business leaders to share the latest status and to garner support for continued loan consideration activities;
XIV. May 2011:

a) Jon Lauckner, President of GM Ventures and prior head of global product planning and global program management, attempts to contact senior LPO leadership to share GM's viewpoint on the market and business opportunity. LPO leadership refuses to speak with Mr. Lauckner
b) Miscellaneous letters and expressions of support into the DOE are input into the DOE from employees, congressional members, etc. and are attached below.
c) PRTM sent the DOE a memo of its independent market assessment of the Bright work truck based on its extensive fleet electrification research it performed for the Electrification Coalition (see attached memo);

XV. May 24, 2011: DOE initiates a conference call with Bright in which it was indicated the volume study used needed to be updated; a new volume study is commissioned by the DOE to be conducted by A.T. Kearney;
XVI. June 1, 2011: Bright meets with ATK and DOE to share market analysis and Voice of the Customer data;
XVII. June 2011: Based on updated volume studies, DOE reinitiates loan application processing;
XVIII. In June/July 2011, partly as a result of the GAO report of February 2011, additional loan covenants were added to Bright's loan package;
XIX. July 2011: During a meeting between Bright and DOE, it was indicated to Bright that its credit report package should be advanced to the interagency process by the end of September 2011 and that receipt of CCL could be realized no later than October 2011;
XX. September 2011: Title XVII wind down activities prioritized over ATVM loan application processing and media/political attention over loans casts a potentially unfavorable light on other applicants;
XXI. October 2011: Bright informed that additional equity raise requirements are needed to bolster overall balance sheet and risk profile, which Bright agreed to; December 1 set as "outside date" for receipt of CCL;
XXII. November 2011: Another "near final" CCL is received by Bright;
XXIII. December 28, 2011: Bright submits a comprehensive summary letter to DOE requesting, among other things, a face-to-face meeting between Bright and DOE senior leadership to discuss the current status and prospects going forward;
XXIV. January 2012: Meeting between Bright and DOE?

Bright's Business Plan Attributes

I. Targeted customers (annual market size is $25 billion, and 900,000 vehicles, in North America) and benefits:

a. Public—local, state and federal (DoD and GSA) governments

i. Bright can help the federal government meet its various policy objectives as announced in April 2011 [2015: all fleet purchases to be alternative fuel vehicles; 1 million PHEV's on the road by 2016; 2020: reduce oil imports by 1/3 50+mpg CAFE.
ii. The IDEA platform is the only domestic engineered and produced all-new PHEV truck; it will get 85+mpg CAFE rating;

iii. The IDEA platform will represent an enabler for the government to economically lower its operating costs in the face of declining budgets as it is targeting a 10-30% lower overall cost to own and operate;

iv. The IDEA platform may be the only viable PEV work truck that can meet the U.S. government's 2015 AFV purchase requirements while offering uncompromised range and payload

b. Private—large and small fleets alike—from AT&T to "Ernie the Plumber"

i. Committed orders already received from Duke Energy, Snap-on Tools and Vectren;

ii. Letters of intention to purchase already received from Aramark, Best Buy, Comcast, Cox Communications, DTE Energy, FritoLay, Servicemaster and Staples; these companies have a combined fleet of 106,500 vehicles;

iii. The IDEA will provide key functional, environmental and economic benefits to address fleet operator challenges:

1. Lower total cost of ownership—by 10 to 30 percent depending on the vehicle it is replacing;

2. Reduced exposure to volatile fuel prices—full-sized vans typically use about 10 gallons of gasoline per day, the IDEA will use about 2 gallons;

3. Reduced carbon footprint—each vehicle will save 16 tons of CO_2 emissions per year;

4. Enhanced operator productivity—on-board telematics and user-defined features are incorporated into the IDEA platform based on extensive VOC research.

II. Jobs creation expectations:

a. Direct Jobs:

i. Michigan—Vehicle Engineering—200-250
ii. Indiana—Powertrain Engineering—25-30
iii. Indiana—Vehicle Assembly—450-500

b. Indirect Jobs [using a multiplier of 4]: 2700-3120; primarily in the supply base

III. Intellectual property generation:

a. Parallel road-coupled PHEV architecture;
b. Vehicle, Chassis and Powertrain Control Systems;
c. Battery Systems;
d. Light-weighting through use of advanced materials including the extensive use of alloys and repurposed materials.

IV. Reduction of fuel consumption, generation of GHG's, dependency on foreign energy sources:

a. 40 barrels of oil saved per vehicle per year; at planned annual volumes of 50,000, 2 million barrels oil saved per year; over 7 years this equates to 56 million barrels of oil saved;

b. Reduced carbon footprint—each vehicle will save 16 tons of CO_2 emissions per year; at 50,000 planned annual volumes, 800,000 tons of CO_2 not emitted per year; over 7 years this equates to 22.4 million tons of CO_2 not emitted per year.

c. National security benefits:

i. Saves lives by reducing 'in theatre' supply lines;

ii. Reduces the U.S. trade deficit by lowering imported oil requirements;

iii. Reduces the pricing power of OPEC and a funding source for the non-democratic countries that control over 90% of global oil reserves; given current instabilities with Iran and within the Middle East, reducing our exposure has never been more critical.

Bright's Broad and Bipartisan Support:

I. Local level:

a. The communities of Anderson and Mishawaka, IN, and Rochester Hills, MI as well as the Counties of St. Joseph, IN and Oakland, MI have each supported Bright with various incentive programs to support jobs creation.

b. The attached letters were written on our behalf to the DOE:

II. State Level:

a. Both the states of Michigan and Indiana have been steadfast in their support of Bright's initiatives;

b. Incentive packages from both states have been approved for Bright to encourage jobs creation and business development in each state.

III. Federal Level:

a. Bipartisan support exists for Bright—including from Congressional members outside of the states of Indiana and Michigan;

b. Numerous calls of inquiry to the DOE have been made on Bright's behalf;

c. Numerous letters of support, encouragement and, occasionally, frustration have been sent to the DOE by members of Congress—some of them are included here:*

General Details

I. Bright itself represents a significant voice of support for the ATVM program, and not only for its own purposes, but for the country's. Bright leadership favorably commented on the ATVM program in the USA Today on 26 September ("Green-Car Fund Dodges Bullet.") As conveyed in the attached OpEd* sent to the Indianapolis Star and Detroit Free Press, Bright strongly supports the merits of the program when understood in the broader context of our country's future competitiveness, and, therefore, well being.

II. Bright is committed to continue this public support of the ATVMLP going forward as needed or requested—in the media, in Congress, etc.

III. Bright has complied with the ATVM rules and process from day 1—DOE should consider implications from a fairness perspective if it decides to change the "rules" after 3 years where Bright has steadfastly followed the process set before it and complied with every request from the DOE on its loan application.

IV. Bright employees have voluntarily reduced/deferred their pay on two separate occasions—currently, 85% of Bright employees are participating;

V. Bright's top management has committed more than their time and efforts, they have contributed a substantial amount of their net worth in the form of investment and bridge loans to keep the company moving forward while the loan approval process continues;

VI. Bright's alternatives and plans going forward should the ATVMLP fail to be administered in the way Congress envisioned when first created in 2007 and 2008 include going to other foreign entities that have expressed interest in Bright:

a) China—A Term Sheet was established with a non-government investment fund in December 2011; currently a Joint Venture agreement is being finalized;

b) Turkey—inquiries have been made by various parties in Turkey and are being investigated;

c) Middle East—numerous inquiries from sovereign wealth funds in Qatar and the United Arab Emirates have been received and are being investigated.

d) Majority foreign investment has an unfortunate consequence—namely that the jobs, intellectual property and know how would be transferred to the country from which the investments are made.

e) Meetings with dozens of leading investment banks and private equity firms have made it clear that domestic funding—due at least in part to the precedent set by other loan recipients—requires an ATVM loan. Thus, any domestic manufacturing scenario for Bright likely requires the completion of the CCL and subsequent loan funding.

BRIGHT AUTOMOTIVE,
February 23, 2012.

SECRETARY STEVEN CHU,
Department of Energy, Washington, DC.

DEAR SECRETARY CHU: We know that you are well aware of the long journey Bright Automotive taken as we await disposition on our DOE ATVM loan application. Our letter of December 2011 (attached) outlined the process through 2011. Un-

* Letters have been retained in committee files.
* Document has been retained in committee files.

fortunately, despite the many exhaustive efforts by us and your loan team, it has not yet advanced into the interagency process—and time is running out.

Our application was filed in December 2008 and after myriad discussions and changes in the requirements we had to meet, we still find ourselves today stuck. The engine of our enterprise is still running, but we are literally almost out of fuel. If our ATVM application is not moved forward to the next level by March 2, 2012, our mission ends. Period.

WE NEED YOUR IMMEDIATE HELP AND INTERVENTION TO AVOID THIS OUTCOME

One and a half years ago we were told by DOE that our loan approval was merely "weeks away." And, on a number of occasions we were told point blank to "do this" and our application was complete and ready for the next stage. Even though requirements have been altered numerous times, we have continued to be responsive and always in a timely manner. That is, until now. The latest revised loan terms received earlier today, are unacceptable to us and our potential investors. These concerns have been conveyed to your loan team.

Ironically, while we were meeting with DOE officials in Washington D.C. today, our President was giving a speech to college students saying "we need to develop the technology that makes us use less oil and gasoline."

We understand the political assault and the often misguided and partisan criticism unfairly waged against you and your team. For some inexplicable reason, those slamming clean energy initiatives do not grasp the national security risk in our inaction to free us from a dependency on foreign oil, often from countries that just don't like America.

Just the other day, the Iranians stopped selling oil to Great Britain and France. Iranian oil represents a pittance of both countries oil imports, yet oil immediately shot up to $105 a barrel on world markets. Overnight, Americans got another shock at the pump, with more shocks predicted on our way to $5 a gallon, clearly threatening the fragile recovery of our economy. Consider what will happen if events escalate further. Americans will go from being angry to being scared. Bright's efforts will help mitigate this.

Of course, some critics will argue that if Bright Automotive's technology is so promising, there should be no problem whatsoever is gaining more than enough private funding for our project. We know that is not the case. While we will be successful in literally matching a potential ATVM loan dollar-for-dollar with private funding, we cannot continue without the loan. The market has been distorted in this arena and the private capital funds capable of fully funding ventures like Bright Automotive are simply nonexistent.

These same critics have little historical perspective on how government funding helped this country succeed in many previous advanced technology arenas. The Internet and GPS would not be common place, can't-live-without extensions of our lives and livelihoods without the U.S. Government serving as the early financial catalyst—not to mention the contributions the space program has made to society. Today, we take those game-changing technologies for granted.

Unfortunately, irrationality and petty politics have paralyzed your agency at a time America needs you most. One cannot score if one does not shoot.

We need our shot and an assist from the DOE. Our team has been performing brilliantly for more than three years now. We have practiced, got ourselves in peak performance shape and are ready to play. Give us the ball and we will shoot to win.

And what does winning mean for Bright Automotive and our country? It means hundreds of great manufacturing and technical jobs and thousands of indirect jobs in Indiana and Michigan—the heart of America. It means a stellar product; the Bright IDEA plug-in hybrid electric commercial vehicle that provides lowest total cost of ownership for our commercial fleet customers. It means green technology that is truly green when it comes to a business' bottom line. It means taking yet another step forward in our national goal to wean America away from our addiction to foreign oil and its implications on national security and our economic strength.

Sadly, the deadline I presented earlier in this letter is solid. If we reach March 2nd without positive movement on our ATVM application, our American jobs, American technological innovation and our promise to save commercial fleet customers millions in fuel savings will evaporate.

We trust that you and your DOE team will respond accordingly.

Respectfully,

REUBEN MUNGER,
CEO.

MIKE DONOUGHE,
COO.

BRIGHT AUTOMOTIVE,
February 28, 2012.

SECRETARY STEVEN CHU,
Department of Energy, Washington, DC.

DEAR SECRETARY CHU, Today Bright Automotive, Inc will withdraw its application for a loan under the ATVM program administered by your department. Bright has not been explicitly rejected by the DOE; rather, we have been forced to say "uncle". As a result, we are winding down our operations.

Last week we received the fourth "near final" Conditional Commitment Letter since September 2010. Each new letter arrived with more onerous terms than the last. The first three were workable for us, but the last was so outlandish that most rational and objective persons would likely conclude that your team was negotiating in bad faith. We hope that as their Secretary, this was not at your urging.

The actions—or better said "lack of action"—by your team means hundreds of great manufacturing and technical jobs, union and non-union alike, and thousands of indirect jobs in Indiana and Michigan will not see the light of day. It means our product, the Bright IDEA plug-in hybrid electric commercial vehicle, will not provide the lowest total cost of ownership for our commercial and government fleet customers, saving millions of barrels of oil each year. It means turning your back on a bona fide step forward in our national goal to wean America away from our addiction to foreign oil and its implications on national security and our economic strength.

In good faith we entered the ATVM process, approved under President Bush with bi-partisan Congressional approval, in December of 2008. At that time, our application was deemed "substantially complete." As of today, we have been in the "due diligence" process for more than 1175 days. That is a record for which no one can be proud.

We were told by the DOE in August of 2010 that Bright would get the ATVM loan "within weeks, not months" after we formed a strategic partnership with General Motors as the DOE had urged us to do. We lined up and agreed to private capital commitments exceeding $200M—a far greater percentage than previous DOE loan applicants. Finally, we signed definitive agreements with state-of-the-art manufacturer AM General that would have employed more than 400 union workers in Indiana in a facility that recently laid-off 350 workers. Each time your team asked for another new requirement, we delivered with speed and excellence.

Then, we waited and waited; staying in this process for as long as we could after repeated, yet unmet promises by government bureaucrats. We continued to play by the rules, even as you and your team were changing those rules constantly—seemingly on a whim.

Because of ATVM's distortion of U.S. private equity markets, the only opportunities for 100 percent private equity markets are abroad. We made it clear we were an American company, with American workers developing advanced, deliverable and clean American technology. We unfortunately did not aggressively pursue an alternative funding path in China as early as we would have liked based on our understanding of where we were in the DOE process. I guess we have only ourselves to blame for having faith in the words and promises of our government officials.

The Chairman of a Fortune 10 company told your former deputy, Jonathan Silver, that this program "lacked integrity"; that is, it did not have a consistent process and rules against which private enterprises could rationally evaluate their chances and intelligently allocate time and resources against that process. There can be no greater failing of government than to not have integrity when dealing with its taxpaying citizens.

It does not give us any solace that we are not alone in the debacle of the ATVM process. ATVM has executed under $50 million of transactions since October of 2009. Going back to the creation of the program, only about $8 billion of the approved $25 billion has been invested. In the meantime, countless hours, efforts and millions of dollars have been put forth by a multitude of strong entrepreneurial teams and some of the largest players in the industry to advance your articulated goal of advancing the technical strength and clean energy breakthroughs of the American automotive industry. These collective efforts have been in vain as the program failed to finance both large existing companies and younger emerging ones alike.

Our vehicle would have been critical to meet President Obama's stated goal of one million plug-in electric vehicles on the road in 2015 and his commitment to buy 100 percent alternative fueled vehicles for the Federal Fleet. So, we are not the only ones who will be disappointed.

The ineffectiveness of the DOE to execute its program harms commercial enterprise as it not only interfered with the capital markets; it placed American companies at the whim of approval by a group of bureaucrats. Today at your own ARPA-E conference, Fred Smith, the remarkable leader of FedEx, made the compelling case to reduce our dependence on oil; a product whose price is manipulated by a cartel which has caused the greatest wealth transfer in our history from the pockets of working people and businesses to countries, many of whom are not our allies. And yet, having in hand a tremendous tool for progress in this critically strategic battle—a tool that drew the country's best to your door—you failed not only in the deployment of funds from ATVM but in dissipating these efforts against not just false hope, but false words.

For us, this is a particularly sad day for our employees and their families, as well as the employees and families of our partners. We asked our team members on countless occasions to work literally around the clock whenever yet another new DOE requirement came down the pike, so that we could respond swiftly and accurately. And, we always did.

Sincerely,

REUBEN MUNGER,
CEO.

MIKE DONOUGHE,
COO.

BRIGHT AUTOMOTIVE,
Rochester Hills, MI, March 7, 2012.

Subject: Bright Automotive and its 39-Month ATVM Loan Program Application History

DEAR SENATE ENERGY COMMITTEE MEMBERS: Enclosed is a series of documentation concerning Bright Automotive's 39-month application to the Department of Energy's ATVMLP. On February 28, 2012, Bright announced in a letter to DOE Secretary Chu that it would withdraw its application and wind-down its operations due to the DOE's lack of good-faith negotiations and commitment to resolve the loan application in a manner that could constructively create a privately-financed deal while protecting the taxpayer. It is an unfortunate, if not tragic, outcome that we hope can be avoided in the future by getting these facts out in front of the public; and holds the unelected officials within the DOE ATVMLP to a fair level of accountability.

As our experience to date with ATVMLP has been extensive, we want to provide a comprehensive summary of our status and situation throughout the three-plus-year unsuccessful processing of our loan application. The most thorough description is contained in the December 28, 2011 letter sent to Secretary Chu at the request of the DOE. Below are an overview and history of Bright and our experience with ATVM. We also provide other supporting documentation as described below.

WHAT BRIGHT AUTOMOTIVE WAS OFFERING THE COUNTRY AND ITS CUSTOMERS

- The ATVM Loan Program was created by the Bush Administration and expanded by the Obama Administration to encourage the creation of fuel-efficient vehicles in the face of ever-present dependence on foreign oil. Bright Automotive was to help fulfill this objective, by reducing ownership costs for public and private fleet operators, reduce dependencies on foreign energy sources and develop homegrown advanced technologies;
- Bright was spun out of the of a consortium of Google.org, Rocky Mountain Institute, the Turner Foundation, Alcoa, and Johnson Controls in 2007, and incorporated in January of 2008, well before ATVM was operational;
- Bright was to produce the Bright IDEA: a light-weight road-coupled plug-in hybrid electric vehicle (PHEV) in the form of a commercial work truck in the U.S. that would create more than 675 American-based direct and at least 2700 indirect jobs—largely in the Midwest. With an electric-range of over 30 miles and charge-sustaining efficiency of over 35 miles per gallon, each vehicle would have saved about 40 barrels of oil and reduced CO_2 emissions by 16 tons per year;
- Bright's PHEV is the first truck engineered from the ground up as a plug-in electric vehicle (PEV) designed for commercial and government customers that purchase more than 900,000 vehicles a year in North America. These customers appreciate and demand the 10-30 percent lower "total cost of ownership" the Bright vehicle promised compared to competitive vehicles in its class;
- Bright received confirmed orders from customers including Duke Energy and Snap-on Tools, as well as letters of support sent to DOE Secretary Chu from firms such as Comcast, Frito Lay and ServiceMaster. Consultants to the DOE

were told by leaders of companies such as Frito Lay that they were ready to purchase tens of thousands of Bright IDEAs;
- The Bright IDEA was to advance several of the Federal Government's policy goals, most importantly offering an Alternative Fuel Vehicle for its van and pickup applications to help fulfill the government's 2015 pledge to exclusively procure AFV's;
- Bright's projected CAFE number was over 85-mpg, and its CO_2 was to be 102g/mi while having a footprint of over 62-sq ft, offering an example of how CAFE standards can be exceeded without having to "downsize" the fleet;
- Bright completed multiple projects for the U.S. Postal Service and Department of Defense—each one on time and under budget—and would have likely had non-tactical vehicle orders from the DoD as well as from the GSA;
- Bright developed key partnerships with large, established entities such as General Motors and AM General;

AS THE CLOCK STARTS TICKING AND THE PROMISES BEGIN STACKING UP, THE ONLY CONSTANT IS THE EVER-CHANGING REQUIREMENTS FROM THE DOE

- Bright's ATVM loan application is deemed "substantially complete" in December 2008 and remains in the loan approval process continuously until March of 2012;
- In September of 2009, at the request of senior DOE officials to resubmit its loan request with a lower amount which if "under $300M would be approved quickly," Bright reduces its loan request from $450M to $284M, to be matched with $120 million of private equity;
- In January 2010, after receiving little progress with its reduced loan request, Bright is told by senior LPO leadership that if Bright establishes a strategic partnership with a major OEM, the DOE will greatly speed up its loan approval process, saying it will "move heaven and earth";
- Bright establishes a strategic partnership and investment with General Motors in July 2010 and senior LPO leadership indicate face-to-face with Bright leadership that the loan approval will be "weeks, not months;" promising a maximum of 2 months to loan approval;
- September 2010, DOE unexpectedly establishes six (6) additional definitive agreements required for a Conditional Commitment Letter (CCL) in its first draft term sheet. Bright agrees to them all. These added requirements are achieved by December 2010, covering a technical center lease and various supply, manufacturing and service agreements;
- Due diligence for Bright's loan application, establishing technical and market viability, is deemed complete in January 2011 and a "near final" CCL is issued to Bright, marked up with a slightly higher $314M loan amount. A second draft term sheet is presented to Bright. Bright officials agree to the new terms in the draft;
- Consideration for Bright's loan application is suspended in May 2011 on the basis of volume projections from IHS Global Insight which were found to be significantly flawed—although Bright had highlighted the flawed projections a year earlier. A new study is commissioned and completed by AT Kearny in June 2011;
- In June/July 2011, additional loan covenants are added to Bright's loan package;
- In July 2011, DOE senior leadership indicates to Bright the expectation that its loan will be advanced to the interagency process by September 2011 with loan approval following in October 2011;
- ATVM loan applications are deprioritized in September 2011 in favor of Title XVII loan approval activities; further, unfavorable publicity associated with Title XVII (Solyndra) and ATVM loan (Fisker) recipients appears to negatively impact companies such as Bright that remain in the ATVMLP approval process;

AND THE BEATING GOES ON

- In October of 2011, the DOE informs Bright that the equity requirements would be doubled to roughly $240M for its $314M loan, among other new terms, for its third draft term sheet, Bright quickly agrees to the new terms, including the increased equity. Bright goes on its second "bridge loan" and 85 percent of the company begin salary deferral to try and maintain cash while it concludes its DOE negotiation process.
- In December of 2011, the DOE informs Bright that it has completed its credit paper and is awaiting an internal decision on the "purpose of the ATVM program" before advancing the application to OMB;

- In late January/early February 2012, DOE representatives conduct a three-day site visit of Bright's Indiana and Michigan operations, including detailed discussions regarding all aspects of Bright's business including vehicle development, manufacturing, customers, sales, marketing and finance. At the end of the visit, DOE's technical team leader Jef Walker tells Bright COO Mike Donoughe: "This is the best site visit I have ever been on." Walker had been conducting site visits for at least 15 years.
- In February of 2012, after several urgings to work towards the resolving the third term sheet and quickly get to a deal finalization of a then 38-month process, the DOE presents a fourth draft term sheet, this time raising equity requirements to more than $350M—significantly more than the $314M loan amount Bright is seeking and far more private equity compared to previous loans to Tesla, Fisker, Ford and Nissan. Moreover, the DOE requires for Bright to spend all of the private equity before drawing on the loan, and justifies its decision based on an assessed "risk of a 9 month delay" it cannot identify or quantify based on its research; nor can any automotive experts validate.

"UNCLE"

- Bright investors and management conclude after this lengthy process that, despite earlier and multiple DOE promises and continuously changing requirements and "phantom" concerns, the agency does not intend to find a workable deal with Bright that achieves the objectives of the ATVM program while protecting tax payers.
- Clearly, DOE has been negotiating in bad faith. Without the cash runway required to explore alternative pathways (which Bright had in abundance right after the GM deal in July 2010), it is forced to wind down.
- In March of 2012, Secretary Chu, ironically appearing at a clean-energy truck show in Indianapolis, tells a Bright employee (recorded) that Bright did not get its loan due to "market issues," and although "its technology is good" the DOE knew the Bright loan wouldn't work "for the last year and a half." This was never communicated with Bright (see previous history).

ENCLOSED DOCUMENTATION

Enclosed is a set of documentation* highlighting Bright's experience with the ATVM process. The 12/28/2011 letter contains the most thorough documentation of the history, with several supporting documents contained within.

- 2/28/2012 Letter to Sec Chu announcing withdrawal from ATVM and rationale
- 2/23/2012 Letter to Sec Chu requesting action to speed a decision on Bright loan
- 12/28/2011 Letter to Sec Chu describing history of Bright ATVM loan (extensive)
- 5/20/2011 Email to Sec Chu from Amory Lovins requesting action on Bright ATVM loan
- 9/22/2009 Letter to ATVM program resubmitting loan for reduced amount
- Bright-DOE Exchange—tracking of every DOE interaction through 2010
- Calendar—another view of the DOE exchanges from 2009-10
- DOE Timing Log—higher level summary of key DOE interactions
- CCL/term sheet drafts highlighting the changing DOE terms as dated below:

  11/8/10; 1/24/11; 2/3/11; 9/12/11; 12-12-11; 2-23-12

Respectfully,

REUBEN MUNGER,
Chairman and CEO.

MIKE DONOUGHE,
Chief Operating Officer.

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*Documents have been retained in committee files.