

# **EXHIBIT 1**



**Department of Energy**  
Washington, DC 20585

December 2, 2008

Bruce S. Maxwell  
Chief Financial Officer  
XP Vehicles, Inc  
601 Van Ness Avenue  
Suite E3613  
San Francisco, CA 94102

Dear Mr. Maxwell:

Thank you for submitting your application in response to the Interim Final Rule ("IFR") for the Advanced Technology Vehicles Manufacturing Incentive Program. In the IFR, the Department of Energy (DOE) stated that it "will consider and evaluate *substantially complete applications* (emphasis added) as and when they are submitted during the first tranche period, which will close on December 31, 2008." DOE has determined that the application you submitted on November 10<sup>th</sup> is not substantially complete. We will need to receive the requested items prior to continuing to evaluate your application.

In order for that application to become substantially complete you must provide the information described in the attachments to this letter. In preparing these attachments, DOE relied on Section 611.101 of the Interim Final Rule—the section of the regulation that details what must be included in an application for a loan. The information required by Section 611.101 falls into four broad categories: (1) general, (2) financial, (3) technical and (4) environmental. The attachments to this letter set forth, by reference to the subsections of Section 611.101, the additional information that needs to be submitted for an application to be determined substantially complete. The attachments also indicate those sections in Section 611.101 that DOE has determined are substantially complete. A determination that a requirement is substantially complete does not restrict DOE from requesting additional information in its evaluation of an application.

In order to be considered for a loan in the first tranche period, a substantially complete application must be submitted to DOE no later than December 31, 2008.

In order to assist you in submitting a substantially complete application, DOE representatives are available to meet with you or you may submit your questions in writing. Should you desire a meeting or want to submit questions, please contact Brent Peterson, at 202-586-8146.

In addition to providing the assistance described above, please be assured that DOE is committed to a prompt review of your application as soon as it is deemed substantially complete.

Sincerely,

A handwritten signature in black ink, appearing to read "Ezechiel Seward", is written over a horizontal line.

Ezechiel Seward

Director, Advanced Technology Vehicles Manufacturing Loan Program



Printed with soy ink on recycled paper



U.S. DEPARTMENT OF

**ENERGY**

Advanced Technology Vehicles Manufacturing Loan Program

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Applicant:

XP Vehicles

## General Requirements

☒ A) A certification by the applicant that it meets each of the requirements of the program as set forth in the statute, the regulations in this part, and any supplemental requirements issued by the DOE [Section 611.101(a)];

Though a certification statement was included in the application overview provided, the certification statement provided was not directly signed by an officer of the applicant organization.

☐ B) A description of the nature and scope of the proposed project for which a loan or award is sought under this part, including key milestones and location of the project [Section 611.101(b)];

Substantially Complete. Although a description is provided, no XP Vehicles manufacturing facilities or working prototypes currently exist, placing them in the category of "new manufacturer" under the statute and DOE's IFR.

☒ C) An analysis of projected market use for any product (vehicle or component) to be produced by or through the project, including relevant data and assumptions justifying the analysis, and copies of any contractual agreements for the sale of these products or assurance of the revenues to be generated from the sale of these products [Section 611.101(g)];

The applicant's business plan incorporates a short market analysis which identifies the market opportunity for their technology including market size, target markets, distribution strategy, and a brief competitive analysis. There is no significant data or listed assumptions, however, included to support their claims.

☐ D) Written assurance that all laborers and mechanics employed by contractors or subcontractors during construction, alteration, or repair that is financed, in whole or in part, by a loan under this Part shall be paid wages at rates not less than those prevailing on similar construction in the locality, as determined by the Secretary of Labor in accordance with 40 U.S.C. sections 3141-3144, 3146, and 3147 [Section 611.101(m)];

Substantially Complete.



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Advanced Technology Vehicles Manufacturing Loan Program

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☐ E) Completed Form SF-LLL, as required by 10 CFR Part 601 [Section 611.101(n)]

Substantially Complete.



U.S. DEPARTMENT OF  
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Advanced Technology Vehicles Manufacturing Loan Program

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Applicant:

XP Vehicles

## Financial Requirements

☒ A) A detailed estimate of the total project costs together with a description of the methodology and assumptions used to produce that estimate [Section 611.101(d)];

Project costs have been included in the application as an addendum to the original application, however, the applicant has simply provided their financial projections for their anticipated project costs with no further detailed description or justification of how these numbers were obtained.

☒ B) A detailed description of the overall financial plan for the proposed project, including all sources and uses of funding, equity, and debt, and the liability of parties associated with the project [Section 611.101(e)];

General corporate financial projections are included with this application, though again, there is little to no detail with regard to the proposed project's financial plan. They provide only the top-level numbers of what they believe it will take to successfully launch the vehicle over the next 5 years. There is no further breakdown at the project level of funding, equity or debt amounts. Also, there is no detail or information concerning the liabilities of parties associated with the project.

☒ C) Applicant's business plan on which the project is based and applicant's financial model presenting project *pro forma* statements for the proposed term of the obligations including income statements, balance sheets, and cash flows. All such information and data must include assumptions made in their preparation and the range of revenue, operating cost, and credit assumptions considered [Section 611.101(f)];

In addition to the financial projection mentioned above, the applicant includes the following corporate financial projection documentation: a P&L statement, Sources and Uses of Funds, and a Balance Sheet. There is no back-up information concerning assumptions, no footnotes to refer to, etc.

☒ D) Financial statements for the past three years, or less if the applicant has been in operation less than three years, that have been audited by an independent certified public accountant, including all associated notes, as well as interim financial statements and notes for the current fiscal year, of the applicant and

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parties providing the applicant's financial backing, together with business and financial interests of controlling or commonly controlled organizations or persons, including parent, subsidiary and other affiliated corporations or partners of the applicant [Section 611.101(h)];

This applicant is in a start-up phase, and as such, has not included any audited financial information.

☒E) A listing and description of assets associated, or to be associated, with the project and any other asset that will serve as collateral for the Loan, including appropriate data as to the value of the assets and the useful life of any physical assets. With respect to real property assets listed, an appraisal that is consistent with the "Uniform Standards of Professional Appraisal Practice," promulgated by the Appraisal Standards Board of the Appraisal Foundation, and performed by licensed or certified appraisers, is required [Section 611.101(k)];

The applicant lists intellectual property, including 11 pending patent applications and four established patents, as well as trade relationships in its application. No supporting data was provided as to the value of this intellectual property, or as to the assets that might serve as collateral for the loan.

☒F) An analysis demonstrating that, at the time of the application, the applicant is financially viable without receipt of additional Federal funding associated with the proposed project, and that there is a reasonable prospect that the applicant will be able to make payments of principle and interest on the loan as and when such payments become due under the terms of the loan documents, and that the applicant has a net present value which is positive, taking all costs, existing and future, in account. This information must include, from publicly traded companies, relevant filings with the Securities and Exchange Commission [Section 611.101(l)];

The applicant is high-technology start-up and as such, cannot demonstrate financial viability as a going concern until it reaches a positive cash flow situation. There is also a risk that a government loan will not be sufficient to entice private investors to supply the additional dollars required to successfully launch the applicant's product to the market.



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## Advanced Technology Vehicles Manufacturing Loan Program

Applicant:

XP Vehicles

**Technical Requirements**

☒ A) A detailed explanation of how the proposed project qualifies under the applicable law to receive a loan or award under this part, including vehicle simulations using a generally accepted model to show projected fuel economy [Section 611.101(c)];

The application did not provide sufficient data to verify vehicle mileage and/or component efficiency claims. For example, while adequate analysis and modeling may have been employed to provide the estimated performance of specific vehicles or components, this performance must be able to be verified independently. Two possible paths for verification are suggested:

- 1) Provide the detailed inputs to your analysis/modeling process, describe the analysis process fully, and provide the informational outputs from the model.
- 2) Provide enough data to allow independent verification of each claim. A commonly available model, such as the Argonne National Laboratory's Powertrain Systems Analysis Toolkit (PSAT) would be employed to verify the performance claims.

Examples of desired data are provided below.

Overall Vehicle:

| Name/Description                   | Unit           | Example |
|------------------------------------|----------------|---------|
| Vehicle mass minus powertrain mass | kg             | 1000    |
| Frontal area of the vehicle        | M <sup>2</sup> | 2.2     |
| Drag coefficient                   | Unitless       | 0.28    |
| Vehicle test mass                  | kg             | 1340    |

Electric Machines:

*Parameters*

| Name/Description                                | Unit | Example |
|---|------|---------|
| Electric machine mass                           | kg   | 50      |
| Inverter mass                                   | kg   | 20      |
| Time to go from 10 to 90% max torque            | s    | 0.05    |
| Time the motor can remain at maximum torque     | s    | 120     |
| Max current allowed by the motor and controller | A    | 480     |



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## Advanced Technology Vehicles Manufacturing Loan Program

|   |       |       |
|---|-------|-------|
| Minimum voltage allowed by the motor and controller | V     | 120   |
| Maximum power                                       | W     | 50000 |
| Motor base speed                                    | rad/s | 300   |
| Inertia   | kg.m2 | 0.02  |

*Performance*

| Name/Description                                  | Unit  |
|---|-------|
| Speed vector indexing the continuous torque curve | rad/s |
| Continuous torque curve                           | Nm    |
| Speed vector indexing the maximum torque curve    | rad/s |
| Maximum torque curve                              | Nm    |
| Speed vector indexing the efficiency              | rad/s |
| Torque vector indexing the efficiency             | Nm    |
| Efficiency map                                    | %     |

## Engines:

*Parameters*

| Name/Description                     | Unit  | Example  |
|--------------------------------------|-------|----------|
| Engine mass                          | kg    | 220      |
| Time to go from 10 to 90% max torque | /     | 0.2      |
| Time to go from 90 to 10% max torque | /     | 0.05     |
| Idle speed                           | rad/s | 80       |
| Maximum power                        | W     | 50000    |
| Fuel heating value                   | J/kg  | 42500000 |
| Displacement                         | cc    | 1987     |
| Inertia                              | kg.m2 | 0.08     |
| Starting speed                       | rad/s | 10       |

*Performance*

| Name/Description                                   | Unit  |
|--|-------|
| Speed vector indexing the wide open throttle curve | rad/s |
| Wide open throttle torque curve                    | Nm    |
| Speed vector indexing the closed throttle curve    | rad/s |
| Closed throttle torque curve                       | Nm    |
| Speed vector indexing the fuel rate                | rad/s |
| Torque vector indexing the fuel rate               | Nm    |
| Fuel rate map                                      | kg/s  |

Detailed specific data for other components as employed in your applications is also required (such as transmissions, advanced batteries, etc.).





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Applicant:

XP Vehicles

## Environmental Requirements

☒A) A list showing the status of and estimated completion date of applicant's required project-related applications or approvals for Federal, state, and local permits and authorizations to site, construct, and operate the project, a period of 5 years preceding the submission of an application under this Part [Section 611.101(i)];

No environmental permitting information provided

☒B) Information sufficient to enable DOE to comply with the National Environmental Policy Act of 1969, as required by § 611.106 of this part [Section 611.101(j)];

No environmental information was provided to comply with the requirements of section 106 of the Interim Final Rule (10 CFR 611.106).

# **EXHIBIT 2**



**Department of Energy**  
Washington, DC 20585

December 31, 2008

Bruce S. Maxwell  
Chief Financial Officer  
XP Vehicles, Inc  
601 Van Ness Avenue, Suite E3613  
San Francisco, CA 94102

Dear Mr. Maxwell:

The Department of Energy (DOE) has determined that your application for the ATVM loan program is substantially complete. Accordingly your application will now be reviewed to determine whether you are an Eligible Applicant as set forth in Section 611.100 of the Interim Final Rule (IFR) and your proposed project is an eligible project as defined in Section 611.2 of the IFR. DOE will advise you if it needs additional information as it continues the application review process. We are committed to processing your application as quickly and responsibly as possible.

Since your application has been reviewed by DOE and is substantially complete, we will now proceed to the next stage in the review process. To enable DOE to more efficiently proceed with its review, please submit your application (with any changes included to reach the substantially complete level) in electronic form. Please send your documents to [Brent.Peterson@hq.doe.gov](mailto:Brent.Peterson@hq.doe.gov) in their original format (i.e., as Word and/or Excel files). Do not submit .PDF files for this review.

In addition, and as part of the ongoing review, DOE contractors will be reviewing applications. Therefore, please sign and return to me – via e-mail to [Brent.Peterson@hq.doe.gov](mailto:Brent.Peterson@hq.doe.gov) or via facsimile to (202) 586-4504 – the following acknowledgement:

XP Vehicles acknowledges that in the course of DOE's review of its application for a loan under the Advanced Vehicles Manufacturing Incentive Program, DOE contractors will be involved in the review of my application. All such contractors have been screened for conflicts and have executed DOE confidentiality agreements.

\_\_\_\_\_  
Signature of Applicant's Responsible Officer

\_\_\_\_\_  
Date

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Lachlan W. Seward", is written over a horizontal line.

Lachlan W. Seward  
Director

Advanced Technology Vehicles Manufacturing Loan Program



# **EXHIBIT 3**



**Department of Energy**  
Washington, DC 20585

August 21, 2009

Scott Redmond  
Chairman  
XP Vehicles, Inc  
601 Van Ness Avenue, Suite E3613  
San Francisco, CA 94102

Dear Mr. Redmond:

On behalf of the U.S. Department of Energy (DOE) we would like to thank you for submitting an application to the Advanced Technology Vehicles Manufacturing Incentive Program (ATVMIP). We recognize and appreciate the effort you put into preparing your application. Applications, such as yours, that were determined to be eligible for consideration were subject to an extensive substantive review by the ATVMIP in accordance with the evaluation criteria set forth in the governing regulations. See, 10 CFR 611.103.<sup>1</sup> Unfortunately, due to the large volume of applications received and the amount of loan dollars sought, we are not in a position to award every eligible application. This necessitated that the program choose applications that are most likely to use the limited loan proceeds in a way that will best achieve the goals of the program. Unfortunately, on that basis, your application was not selected for negotiation of a loan.

On behalf of the DOE, I would like to express a sincere appreciation for your interest and participation in the ATVMIP and hope that you will continue to participate in future activities and programs with the DOE. Any questions regarding this notification can be addressed by Chris Foster at 202-586-8146 or [Chris.Foster@hq.doe.gov](mailto:Chris.Foster@hq.doe.gov).

Sincerely,

A handwritten signature in black ink, reading "Lachlan W. Seward".

Lachlan W. Seward  
Director,  
Advanced Technology Vehicles Manufacturing Incentive Program

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<sup>1</sup> A copy of the regulations is also available on the DOE website at [www.energy.com](http://www.energy.com).



# **EXHIBIT 4**



September 21, 2009

The Honorable Steven Chu  
Secretary, Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Secretary Chu,

Several weeks ago, XP Vehicles received a letter simply stating that our loan application under the Advanced Technology Vehicles Manufacturing (ATVM) Program had been rejected. No reasons were given in the letter and only after several attempts at phoning the ATVM office were we able to receive the reasons orally (we still have not received the reasons in writing). We would understand a rejection if the reasons given were applicable to our loan application. However, they were not and many did not even reflect what was included in our submission.

After several more attempts at receiving more clarification from the ATVM office, no one has been in further contact with us. We are still requesting additional information about our loan application and more applicable reasons. Because our efforts have been ineffective, we are asking for your help. We have not even been able to find out whether there will be another round of loans granted and how we can alter our loan application to increase our chances of success.

Our car goes an almost unlimited range via hot-swap cartridges, costs less than \$20,000, uses no gasoline, is easy to repair and build, saves your life better than any other car, is faster than competing solutions, does not require an extension cord, uses electricity and creates green jobs. We need the DOE loan application to conduct further testing, as well as start building a prototype of the vehicle. We already have thousands of customers lined up who want to buy our unique and very "green" car. Our company currently has no debt and our company leaders have been contributing their time and resources for many years based on positive feedback received repeatedly by DOE loan reviewers and staff.

**As stated above, we would understand a rejection of this loan application if legitimate reasons were given, but they were not.** One of the reasons given was that our car does not use E85. No, this car uses NO gasoline which we thought is a goal our country should want to attain. Another reason was that we were not making millions of cars. Our marketing plan did not support that nor did the funding levels we requested. DOE also stated that XP was not planning to sell cars to the government which is 100% false and clearly stated in our application that the core sales plan of the company is based on government fleet sales. We cannot help but wonder if DOE even read the application. Finally, and another example of a failure to read the application, was that DOE asserted our factory cost estimates were too low because the metal body fabrication systems were not calculated high enough. XP Vehicles use no metal fabrication in its bodies.

The Honorable Steven Chu

Page Two

We submitted the following questions to the DOE ATVM staff the day after we received the rejection and have still not received any response:

1. DOE reviewers never even talked to the founder, inventor, engineers, project leads or primary contractors. We even were told over and over again that everything in our application was good and that no additional information was needed. This is despite the fact that the reasons given for our rejection did not reflect the technology being used and therefore the ATVM reviewers did not understand our concept and product. Why was no one at XP Vehicles contacted?
2. After nearly a year of waiting, accompanied by writing, verbal and in-person proclamations that "everything was fine", "everything is on-track", "you appear to meet every criteria", etc. and after staff expended the majority of their personal funds based on these positive assertions, the application was suddenly and mysteriously rejected. Why was staff at DOE during the course of the year, positive about the outcome and never asked for additional information?
3. At the start of the application process XP was told that the review would be very interactive but there was almost no interaction with us while larger players, who applied later, were reviewed earlier, had extensive interaction and have already been awarded their funds. Why was the interactivity process never used with us?
4. Rejection comments supplied by Chris Foster of DOE and third party press seem to be unrelated to the business of the company and have no foundation in fact. Why is that?
5. One of the main reasons they gave us for the rejection was the fact that our vehicles do not use E85 gasoline. If that was true, why did Tesla & Nissan get approved funding? Their vehicles also do not use E85.
6. While it is true that we do not wish to use carcinogenic gasoline, (Here in California we have a sticker on every gas pump that warns that filling your tank is likely to expose you to cancer), at no point was E85 gasoline ever mentioned, discussed, commented on or requested. In fact the topic was particularly avoided by DOE staff. Why not?
7. Another rejection point was that we were not planning to make enough cars. This is false. The company would like to build and sell more cars than any other car company. We are fully willing to produce millions of vehicles if provided with the appropriate funding as it has quantified millions of fleet buyers for its vehicles. No DOE entity ever asked us to adjust, discuss or amend our numbers and we were more than willing to adjust those numbers if anyone had even bothered to ask. One must start out with small steps and were planned to ramp up to a massive number over time. To suggest that one do otherwise would demonstrate questionable judgment. What is the validity of this comment by the reviewers based on?



8. We provided \$100 million+ of asset collateral opportunity for only a \$40M loan. To repeat, we provided over TWICE the collateral of the value of the loan. How is this not as secure of a structure as any of the other applicants?
9. We were told that we were rejected because we were not planning to sell cars to the government. **This is 100% false.** The core sales plan of the company is based on government and commercial fleet sales. Why did your reviewers say this? Why did you think this?
10. Additionally we were told that electric motors and batteries were considered by the reviewers to be too futuristic of a technology and not developed for commercial use even though they have been in use in over 40 industries for over 20 years, including by NASA. What is the rationale for this argument?
11. Almost every other part of the XP car was to be purchased from existing commercial sources with multiple points of supply, so it is not possible to see how a reviewer might think the vehicle had any significant technical acquisition hurdles. Why does DOE assume that the following companies with whom we would be contracting could not perform the following responsibilities:
  - a. Deloitte & Touche to provide auditing and reporting of financial data.
  - b. Autodesk or Microsoft to deliver the process and design software.
  - c. NEC, Intel or the other leading electronics companies in the world to build our controllers.
  - d. Roush Automotive, one of the most successful automobile electronics groups in the world, to build the electronic module.
  - e. US National Lab system to solder a box together.
  - f. Over 100 other major supplier companies that have been building parts for the auto, aerospace and industry for decades to deliver the component parts for our vehicles.
12. The primary purpose of this loan program, XP was told by its authors, was to develop advanced technology and further reduce our dependence on gasoline. The XP Vehicles car uses no gasoline and gets over 125 miles per battery charge. How is this not a direct conflict with the precepts of the Section 136 law?
13. XP was also told that its factory cost was too low because the metal body fabrication systems were not calculated high enough but the reviewers apparently did not even pay attention to the fact that XP uses no metal fabrication in its body. What was the rationale in making such an erroneous comment?
14. Reviewers also stated that the car was a "hydrogen car" which it is not. It is an electric car. Why did they say that?

15. In what ways were the following documents actually reviewed? Your office stated that they "lost our documents" twice. Why?

Documents XP vehicles submitted to DOE:

- Detailed financials that cost the company almost \$200,000.00 to prepare;
- Metrics that demonstrated that the XP car can save millions of lives per year and that it was safer than any vehicle;
- Metrics that demonstrate that a gasoline/hybrid vehicle is dangerously carcinogenic when filled at a gas station compared to an XP Vehicle;
- Engineering and IP metrics that beat every competitor on price, range, safety, TOC, efficiency, toxic safety and hundreds of other points;
- Examples of work from \$3M of cash and person-hours previously invested by founders, DOE & partners;
- Lists of top auto and aerospace corporate partners, staff and resources, on stand-by, equaling thousands of people in all groups combined;
- Validation of a deep team of core staff that have been developing the project and parts of the project for 3-15 years part time;
- Samples of extensive international positive press coverage;
- Proof of a market opening timed with tax and national imperative incentives that created a dramatic window for success;
- Proof that XP was the lowest overhead car company in the market which equates to the best chance to profit and return funds;
- Samples of an in-house created online process management architecture; market and marketing studies;
- CAD designs, engineering plans and manufacturing plans;
- A detailed website;
- A detailed path to \$1.5B within 5 years or less from a less than \$100M investment;
- Examples of dozens of prototypes as seen in the photographs on the BUILDS page of our website;
- Numerous patents;
- Large pending portfolio with third party valuation and validation reports valuing IP at over \$100M;
- People: Senior Scientists, Chemists & Engineers from Top University & Federal Labs, including staff that has built and delivered millions of vehicles to the consumer market;
- Partners: Federal, University, Fortune 500, Private Research Organizations;
- Written Customer inquiries from a massive national customer base of qualified retail leads and 1.2M of commercial unit opportunities equaling a \$1.5B+ opportunity. Also submitted an extensive package of letters from each customer candidate;
- Contracts: Federal Contract fully executed and MOU's executed;
- Awards/Commendations: Congress, DARPA;
- Research Data: Over 200+ technical research documents & 15+ years of research;
- Know How: Over 22,000+ man hours of development;
- Market data;
- Over 100+ documents of industry study;
- Issued trademarks;
- Facilities;
- Unique access to Federal Labs & leased facility options;
- and other supporting materials.

Mr. Secretary, we certainly are not claiming that our vehicles will solve all of our energy problems. However with each car that we sell, we will help reduce our reliance on imported fuel

by putting a vehicle on the road that uses absolutely no gasoline. But we cannot do this without some financial assistance from DOE. We truly are using "advanced technology" in our approach and only ask for DOE's support in moving our process forward. In addition, with a company that has no current debt, several patents, and thousands of interested customers, I would assert that your department's financial risk in investing in our technology would be extremely low.

Although I know you are extremely busy, I would ask for the opportunity to talk with you in person to discuss our technology and how it can help our country. I believe there was some confusion about our application and vehicle technology that I would very much like to clear up with you in person. We are free to discuss this at your earliest convenience and ask that you please consider this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Redmond", followed by a long horizontal line extending to the right.

Scott Redmond  
CEO and Founder

# **EXHIBIT 5**



**Department of Energy**  
Washington, DC 20585

October 23, 2009

Scott Redmond  
Chairman  
XP Vehicles, Inc  
601 Van Ness Avenue  
Suite E3613  
San Francisco, CA 94102

Dear Mr. Redmond:

Thank you for your inquiry into the circumstance regarding the notice that your application was not selected for negotiation of a loan.

This letter is in response to your request for more information in regards to the rejection of the aforementioned application. The application was deemed Substantially Complete on November 10, 2009. On this date, your company completed stage one of the review process, providing the DOE with the necessary information and materials to begin its detailed evaluation process.

Subsequently, extensive review conducted in accordance with the evaluation criteria set forth in the governing regulations found your proposal would not utilize the limited funding available to best achieve the goals of the program. As a result, your application was excluded by the Program from further evaluation.

In regards to your application, the following critical issues were identified:

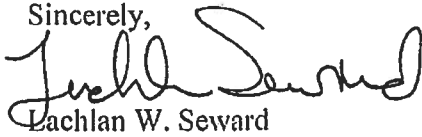
- The proposed technology appeared from the application to be at a development stage and not yet ready for commercialization
  - The assumption that this vehicle concept will be ready for production in less than three years, the allowable funding period under ATVM, is a significant weakness due to the high level of risk associated with the design
- The proposed project's impact on fuel economy of the US Light Duty Fleet over time, as presented by the applicant's calculations and assumptions was determined to be weak
- A review of the use of advanced fuels in your project and the feasibility of that energy source for use in the project as presented by your technical data was questionable
  - The assumptions used in calculating the potential use of hydrogen are based on a storage system that is unproven and potentially impractical for a consumer vehicle
- A review of the calculations and assumptions supporting your claims for reductions in petroleum use for the project were deemed to be unrealistic

We believe the project as presented by XP Vehicles may be commercializable in the future, but is far too early in the development process to qualify for ATVMLP funding.



Thank you for your interest in DOE's Advanced Technology Vehicles Manufacturing Loan Program. We hope that you will continue to participate in future activities and programs with the DOE.

Sincerely,

A handwritten signature in black ink, appearing to read "Lachlan W. Seward". The signature is fluid and cursive, with the first name "Lachlan" and last name "Seward" clearly distinguishable.

Lachlan W. Seward

Director,

Advanced Technology Vehicles Manufacturing Incentive Program

# **EXHIBIT 6**



**Department of Energy**  
Washington, DC 20585

April 10, 2009

Scott Redmond  
Chairman  
Limnia, Inc.  
601 Van Ness Ave.  
Suite E3613  
San Francisco, CA 94102

Dear Mr. Redmond:

Thank you for your application for a loan under the Advanced Technology Vehicles Manufacturing Incentive Program (Program). The Department of Energy (DOE) has carefully reviewed your application and has determined that your proposed project can not, as a matter of law, be funded under the Program. Section 136 of the Energy Independence and Security Act of 2007 (EISA; Pub. L. 110-140) states that DOE is to provide loans under the Program for -

- (1) the cost of reequipping, expanding, or establishing a manufacturing facility in the United States to produce –
  - (A) qualifying advanced technology vehicles; or
  - (B) qualifying components; and
- (2) engineering integration performed in the United States of qualifying vehicles and qualifying components.

(See, 42 U.S.C. 17013(d)(1))) Section 136 defines “engineering integration” as including the costs of engineering tasks related to –

- (A) incorporating a qualifying component into the design of an advanced technology vehicles; and
- (B) designing tooling and equipment and developing manufacturing processes and material suppliers for production facilities that produce qualifying components or advanced technology vehicles.

(42 U.S.C. 17013(a)(3)) In both the specification of eligible activities and the definition of “engineering integration,” eligible engineering integration costs relate to those costs associated with the production of advanced technology vehicles and qualifying components.

Section 136 also defines the term “qualifying component.” A “qualifying component” is a component that DOE determines is “designed for advanced technology vehicles,” and “*installed* for the purpose of meeting the performance requirements of advanced technology vehicles.” (42 U.S.C. 17013(a)(4), emphasis added)





It appears from the proposal in your application that the subject product is a stand alone recharging station. The charging station and associated cassettes do not appear to be designed for installation in an advanced technology vehicle, and therefore are not "qualifying components." As your application does not request funding for activities related to the production of qualifying components (or an advanced technology vehicle), your proposal is not eligible for the Program as established by EISA.

Sincerely,

A handwritten signature in black ink, appearing to read "Lachlan W. Seward". The signature is fluid and cursive, with the first name "Lachlan" and last name "Seward" clearly distinguishable.

Lachlan W. Seward

Director

Advanced Technology Vehicles Manufacturing Incentive Program.

# **EXHIBIT 7**



*Limnia, Inc.*  
150 Post Street, Suite 650  
San Francisco, CA 94108  
1.510-868-2862  
FX 1-510-868-2862  
[contact@limnia.com](mailto:contact@limnia.com)  
[www.limnia.com](http://www.limnia.com)

4.11.09

Lachlan W. Seward  
Director  
ATVM Loan Program  
Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear. Mr. Seward:

Thank you for the communication of April 10, 2009 regarding the Limnia ATVM loan application. There appear to be some points of confusion that we would like to clarify, with hopes that your position will turn to positive support.

We are truly dismayed at the conclusion of the review and, at a minimum, politely request additional consideration.

Limnia has a sound and viable product that fully meets all of the requirements to participate in the ATVM loan program.

Please allow me to directly address ATVM's response that "we are not seeking to manufacture a qualifying component":

With all due respect we ARE manufacturing the "battery" that goes inside the car. Our technology runs an electric car three or more times longer than any traditional battery.

1. The issued patents on this technology clearly describe the technology as being created to be used in advanced technology vehicles.
2. The prime sub-contractor for this project was *Sandia National Laboratories*, Livermore, CA. The vehicle technologies group there were to work on this device for advanced technology vehicles. All such subsequent discussions with Sandia leaders have verified this. By eliminating Limnia from this funding opportunity, millions of dollars is terminated from the National Lab program.
3. Our effort focuses on re-hiring the group that GM had previously employed (which is not feasible for GM to continue with, as the future existence of GM is in doubt). This team is working on improvements to current vehicle technology, part of which is now patented by Limnia, Inc.
4. As inventor of the device and technology I hereby verify that I created this device to be installed in advanced technology vehicles to provide power. This is the core and primary purpose of the device.
5. The basis of the patents and previous work on this device in fact has been funded by DOE for advanced technology vehicles.

6. One must recharge electric vehicles and this device both powers and charges those vehicles. It is interchangeable. The "Recharging Station" is just a name for the same device which would be called an "Auxiliary Power Unit" or "Range Extender" when placed in the car. The cosmetics of the device may be different depending on where it is located but it is an interchangeable device. Please do not consider this to be a device exclusively created for kitchen power or other non-automotive requirement type.

7. We have been recognized with a congressional commendation in the Iraq War bill for helping reduce America's dependence on oil specifically because we replace gasoline in cars with chemical/fuel cell energy.

8. Advanced Technology Vehicle manufacturers are MOU-committed to using our devices once they are manufactured and are counting on this device for those vehicles.

All in all, the device we are proposing IS for advanced technology vehicles and was created for advanced technology vehicles as it's core purpose.

Please advise if we can assist in further clarification. Thank you for your reconsideration of this integral technology in America's automotive future.

Sincerely,

Scott Redmond  
Chairman

Limnia, Inc.

CC: S. Chu, N. Pelosi, H. Reid

# **EXHIBIT 8**



**Department of Energy**  
Washington, DC 20585

May 13, 2009

Scott Redmond  
Chairman  
Limnia, Inc.  
601 Van Ness Ave.  
Suite E3613  
San Francisco, CA 94102

Dear Mr. Redmond:

The Department of Energy (DOE) has carefully considered your letter of April 11, 2009. At this time the additional information has not changed our determination that your proposed project can not, as a matter of law, be funded under the Advanced Technology Vehicles Manufacturing Incentive Program (Program). However, DOE asks for clarification on some issues pertaining to your application.

As we stated in our previous response, section 136 of the Energy Independence and Security Act of 2007 (EISA; Pub. L. 110-140) states that DOE is to provide loans under the Program for -

- (1) the cost of reequipping, expanding, or establishing a manufacturing facility in the United States to produce –
  - (A) qualifying advanced technology vehicles; or
  - (B) qualifying components; and
- (2) engineering integration performed in the United States of qualifying vehicles and qualifying components.

Section 136 defines the term “qualifying component.” A “qualifying component” is a component that DOE determines is “designed for advanced technology vehicles,” and “*installed* for the purpose of meeting the performance requirements of advanced technology vehicles.” (42 U.S.C. 17013(a)(4), emphasis added)

As noted in our previous letter, it appears from the proposal in your application that the subject product is not installed in the advanced technology vehicle. The charging station and associated cassettes do not appear to be designed for installation in an advanced technology vehicle, and therefore were identified as not “qualifying components.”



In order to clarify your initial proposal, we request Limnia respond to the following issues:

- Please provide anticipated production volumes for your product.
- Please indicate the specific advanced technology vehicle into which the product will be installed. In the response letter dated April 11, 2009, the company states that manufacturers are "MOU-committed" to using your devices. Please provide the MOUs and detail the arrangements that have been made.
- Please indicate if all vehicles will require the same number of cassettes and indicate the range that a given vehicle can travel on a charged cassette.
- Please, in text format, explain PowerPoint slides #4, 9, and 10.
- Please detail the vehicle installation process of the device.
- Please expand on the cassette and onboard and off board phases of the cassette's charging/refill and use. Can this cassette be charged onboard the vehicle? If not please explain how the cassette is recharged off board.

Should you have any questions or concerns regarding this matter please contact Brent Peterson at (202) 586-8146 or [brent.peterson@hq.doe.gov](mailto:brent.peterson@hq.doe.gov).

Sincerely,



Lachlan W. Seward

Director,

Advanced Technology Vehicles Manufacturing Incentive Program

# **EXHIBIT 9**





Development Office  
150 Post Street, Suite 650  
San Francisco, CA 94108

June 3, 2009

Department of Energy  
Washington, DC 20585  
Attention: Lachlan W. Seward, Director,  
Advanced Technology Vehicles Manufacturing Incentive Program

**RE: Limnia, Inc. ("Limnia" or the "Company")**

Dear Mr. Seward:

Per your letter of May 13, 2009, Limnia has reviewed Section 136 of the Energy Independence and Security Act of 2007 ("Section 136") in connection with Limnia's application for funding under the Advanced Technology Vehicles Manufacturing Incentive Program. The Department of Energy (the "DOE") appears to have denied Limnia's request at least in part because the DOE has determined that Limnia's cassettes are not a "qualifying component" as that term is defined in subsection (a)(4) of Section 136. Limnia respectfully disagrees with the DOE's determination on this point.

A "qualifying component" is defined by subsection (a)(4) of Section 136 as a component that the DOE determines is "(A) designed for advanced technology vehicles; and (B) installed for the purpose of meeting the performance requirements of advanced technology vehicles." In the DOE's letter of May 13, 2009, the DOE specifically pointed out that it appeared from Limnia's proposal, that "the charging station and associated cassettes do not appear to be designed for installation in an advanced technology vehicle, and therefore were identified as not 'qualifying components.'"

For the following reasons, the Company respectfully suggests to the DOE that the Limnia Cassettes are "qualifying components" as that term is defined in subsection (a)(4) of Section 136. The Company's cassettes provide fuel in the form of hydrogen to advanced technology vehicles. In order to do so, the cassettes *must* be installed prior to use in an advanced technology vehicle and are, accordingly, designed for such installation, and therefore, Limnia Cassettes are prime candidates for identification by the DOE as "qualifying components."

Section 136 does not include any requirements as to the manner or methods by which installation occurs, and thus we do not address this subject. However, we note that the statute expressly contemplates that funding be directed to both automobile manufacturers and component suppliers. Typically, a manufacturer would install components supplied to it by a component supplier. Thus, by clear implication a component supplier need not directly undertake installation of the components manufactured by it.

Per your request and in order to clarify our initial proposal, please see the following responses to the requests for information found on page 2 of your letter of May 13, 2009. The requests of the DOE are set forth below in bold italics, followed by our response.

***Please provide anticipated production volumes for your product.***

Letter to Department of Energy  
June 3, 2009  
Page 2

RESPONSE: The anticipated production volumes for client A are 300,000 units for the first production run of 100,000 vehicles with a set of 3 cassettes per vehicle. The anticipated volumes for Defense Department, Homeland Security, FEMA, seacraft and secondary clients is anticipated to be 250,000 units.

*Please indicate the specified advanced technology vehicle into which the product will be installed. In the response letter dated April 11, 2009, the company states that manufacturers are "MOU-committed" to using your devices. Please provide the MOUs and detail the arrangements that have been made.*

RESPONSE: The first specific advanced technology vehicles is the XP Vehicles, Inc. Runabout with the draft production nomenclature of "MUV". The MOU for this effort is attached.

*Please indicate if all vehicles require the same number of cassettes and indicate the range that a given vehicle can travel on a charged cassette.*

RESPONSE: Each vehicle may operate on a single cassette but optimized performance is achieved with 3 cassettes in the case of flexible charging, discharging and stand-by functionality. The range of each vehicle is contingent on the vehicle manufacturers configuration of the vehicle. Our system, essentially, provides for "unlimited range" because the cassettes are endlessly hot-swappable. Thus, as long as you carry extra cassettes and pick-up additional cassettes at private resellers, along the route, a driver could, conceivably, drive all the way from San Francisco to Washington, D.C. without turning the engine off in an advanced technology vehicle such as the ultralight electric vehicle proposed to be built by XP Vehicles, Inc.

*Please, in text format, explain PowerPoint slides #4, 9, and 10.*

**Slide #4:**

RESPONSE: This slide illuminates the advantages of the Limnia cassettes over batteries and pressure tanks in that the Limnia fuel cassette has distinct advantages such as:

#### HYDROGEN PACKS VS. BATTERIES

- Batteries catch on fire quite a bit and have been the result of many more fires and explosions than hydrogen. AT&T's U-verse TV service now has an exploding battery problem, making it necessary for the firm to replace 17,000 backup batteries in its nationwide network. The Federal Government has OUTLAWED Lithium Batteries on airplanes because they explode unexpectedly so often. Batteries blow up when they want to. Hydrogen blows up when you tell it to. Limnia technology does not provide an explosive source like batteries do.
- Limnia power systems will be designed to run many, many times longer and provide massively greater range per charge than batteries.
- The run time of batteries constantly shortens while Limnia technology does not.
- Batteries have a problematic "Memory Effect" while Limnia technology does not.
- Limnia technology is instant charge via hot-swap while battery packs require hours to recharge.
- Charge life- Limnia systems have an extensive charge life while batteries have a much shorter end-of-life metric.
- The cost per 300 mile range for a Limnia technology car system is far lower than a battery system. A Limnia powered car TODAY that will drive 300 miles without a refill is 50% or less of the price of a battery car that will drive 300 miles without a refill.
- A Limnia system can be charged from a completely clean home energy system but batteries need to be charged from a "sour-grid".

Letter to Department of Energy  
June 3, 2009  
Page 3

- Limnia technology can make energy at home. Batteries cannot.
- Limnia technology has a far higher storage density than batteries.
- Limnia systems are far less bulky than batteries.
- The weight of batteries is so great that it reduces the range of travel of a vehicle which causes the use of wasteful energy just to haul the batteries along with the car. Limnia energy systems weigh far less.
- The disposal of batteries, after use, presents a deadly environmental issue while Limnia technology does not.
- Limnia technology does not self discharge like batteries.
- Batteries cause a greater carbon footprint than Limnia technology
- Batteries require coal be burned to charge them. One pound of coal has roughly 14,000 Btu of chemical energy in it. When everything operates well, all that turns out to be generally around 30% efficient, meaning that 30% of the chemical energy that started out in the coal has become actual electricity. New H2 production systems are up to 93% efficient.

#### HYDROGEN TANKS VS. HYDROGEN SOLID STATE CASSETTES

- Infrastructure cost per cubic foot of H2 is far more expensive with pressurized and liquefied hydrogen.
- In an accident, the pressure tanks could shoot, like a rocket, through hundreds of innocent bystanders killing or maiming most of them.
- In an accident, the pressure wave from pressure tanks expels the organs of nearby people out of their bodies.
- In an accident, the pressure wave from pressure tanks crushes the lungs of nearby people.
- In an accident, the pressure wave from pressure tanks shoots shrapnel through the neighborhood like a hand grenade.
- Ability to ship via UPS/FEDEX/US MAIL does not exist for pressurized and liquefied hydrogen but does for H2 cassettes.
- Percentage of existing infrastructure that can be used for H2 cassettes is far, far greater than that which can be used for pressurized and liquefied hydrogen.
- Insurance costs are far less for H2 cassettes.
- Ability of tank to crush the foot of workers, thus increasing insurances costs, does not exist with H2 cassettes.
- Time to refuel vehicle is only seconds for an H2 cassette while it is many times longer for pressurized and liquefied hydrogen.
- Only the Limnia products have the ability to be hand carried.
- Only the Limnia products are H2-on-Demand where H2 is not present unless needed.
- Limnia products have less bulkiness.
- Limnia products are fully scalable while tanks are not very scalable.
- Limnia products have better hydrogen-source-to-consumption efficiency metrics.
- Limnia products require no special delivery vehicles and can use any common carrier while tanks cannot.
- Tanks require special pipelines while Limnia technology requires no pipelines.
- High pressure is required for tanks while no pressure is required for Limnia technology.

Letter to Department of Energy  
June 3, 2009  
Page 4

- Skin cutting on refueling or refilling occurs with tanks but not with Limnia technology.
- Your finger could freeze and snap off using liquid hydrogen but not with Limnia technology.
- Limnia fuel is intelligent and monitors itself but tanks do not have this ability.
- Limnia fuel notifies you when you need more but tanks do not.
- Limnia fuel advises you of its health and purity but tanks do not.
- The overall transport safety of Limnia beats tanks by at least a magnitude.
- Limnia technology uses off-the-shelf, domestically available scalable components but tanks require special service safety parts.
- Limnia technology has fully rechargeable, recyclable, pressure variable output but tanks do not.
- Limnia technology use may improve insurance premiums but tanks will always increase premiums.
- Factory man-power productivity increases using Limnia at the plant-level over tanks
- All stored H<sub>2</sub> is live and explosive with tanks but not with Limnia.
- Limnia increases balance-of-plant metric but tanks reduce the metrics.
- Limnia's source compound agnostic but tanks are fixed to source compound.
- Limnia's technology is subject to patent protection and tanks are not.
- Limnia base hardware investment is future-protected while tanks are only partially protected.
- Limnia technology is fully systemically modular while tanks are fixed.
- Limnia technology fits the box-like form factor of car while tanks dictate their location.
- Tanks require an extensive safety compound required around customer storage area while Limnia does not.
- Tanks need an annual X-Ray and material audit while Limnia technology does not.
- Limnia technology does not flow across the ground and surfaces in a fire like napalm like liquid hydrogen.

#### GASOLINE VS. HYDROGEN SOLID STATE CASSETTES

- Limnia technology does not flow across the ground and surfaces in a fire like napalm or gasoline.
- Gasoline service stations are one of the primary sources and causes of cancer. Limnia eliminates the need to go to a service station.
- The gasoline and associated vapors in a vehicle while you drive cause cancer, brain damage and numerous health issues and Limnia technology does not.
- The residue after use of gasoline causes numerous environmental damage issues and Limnia technology does not.
- The residue after use of gasoline causes numerous environmental damage issues and Limnia technology does not.
- Gasoline is increasing in cost and hydrogen sources and end product are decreasing in cost.

#### Slide # 9

RESPONSE: This slide illuminates the dramatic reduction in costs of infrastructure deployment and seeks to make the key point that the use of this technology can save the United States many billions of dollars in infrastructure build out for chemical energy and new energy deployment because the overall system can be deployed as stationary individualized systems.

Letter to Department of Energy  
June 3, 2009  
Page 5

**Slide #10**

RESPONSE: This slide illuminates one of many options for deployment of the fuel cassette whereby commercial package delivery services, such as UPS or FEDEX, could deploy fuel cassettes via direct delivery and via pick-up points at their existing nationwide store outlets, which provides an existing, nationwide, already built-out fuel supply for advanced technology vehicles.

***Please detail the vehicle installation process of the device.***

RESPONSE: The vehicle installation of the device requires the following steps for the average installation as an Auxiliary Power Unit (APU) or Range Extender:

- The unit is unpacked and the cable harness is laid out.
- The unit is mounted to the vehicle frame.
- The electronics system interface is connected to the master vehicle I/O bus.
- The battery port connect is connected to the charge controller interface of the electric vehicle battery charging system.

***Please expand on the cassette and onboard and offboard phases of the cassette's charging/refill and use. Can this cassette be charged onboard the vehicle ? If not please explain how the cassette is recharged offboard.***

RESPONSE: Yes, the cassette can be charged on- board the vehicle. A user can have the unit in the car as one option or the users can have a unit in the car and a unit at their home or office as a second option. In one case the medium volume user is processing all of their needs on-board the vehicle, in the latter instance the user is processing onboard and producing a stockpile of additional cassettes at home on a trickle-fill basis so as to avoid the need for a cumbersome inefficient air compressor to fill an intermediate and unsafe tank.

Given the foregoing, Limnia respectfully requests that the DOE reconsider its determination that its proposed project can not, as a matter of law, be funded under the Advanced Technology Vehicles Manufacturing Incentive Program. Limnia would be happy to provide additional information or clarification upon request.

Sincerely,

**LIMNIA, INC.**

---

Patricia Hester, Development Director

# **EXHIBIT 10**

[REDACTED]

-----Original Message-----

From: Marhamati, Joseph [REDACTED]

Sent: Thursday, April 09, 2009 6:33 AM

To: [REDACTED]

Subject: Status of Loan Guarantee Application

April 9, 2009

Scott Redmond  
Limnia, Inc.  
Chairman

Re: Status of Loan Guarantee Application Under Energy Efficiency,  
Renewable Energy and Advanced Transmission and Distribution Technologies  
Solicitation No. DE-FOA-0000005 (the "Solicitation")

Dear Mr. Redmond:

I regret to inform you that due to non-remittance of the required  
application fee, your application will not be reviewed. The application  
has been deemed non-responsive.

Please note that this letter does not prejudice you from applying under  
future solicitations. Thank you for your interest in DOE's Title XVII  
Loan Guarantee Program.

Sincerely,

Daniel C. Tobin  
Senior Investment Officer  
DOE Loan Guarantee Program Office

No virus found in this incoming message.

Checked by AVG - [REDACTED]

Version: 8.0.238 / Virus Database: 270.11.47/2047 - Release Date: 04/08/09  
05:53:00

No virus found in this incoming message.

Checked by AVG - [www.avg.com](http://www.avg.com)

Version: 8.0.238 / Virus Database: 270.11.47/2047 - Release Date: 04/09/09 10:27:00



# **EXHIBIT 11**

United States Government Accountability Office

GAO

Report to the Subcommittee on Energy  
and Water Development, Committee on  
Appropriations, U.S. Senate

February 2011

## DEPARTMENT OF ENERGY

# Advanced Technology Vehicle Loan Program Implementation Is Under Way, but Enhanced Technical Oversight and Performance Measures Are Needed



February 2011



Highlights of GAO-11-145, a report to the Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate

## DEPARTMENT OF ENERGY

### Advanced Technology Vehicle Loan Program Implementation Is Under Way, but Enhanced Technical Oversight and Performance Measures Are Needed

#### Why GAO Did This Study

In the Energy Independence and Security Act of 2007, Congress mandated higher vehicle fuel economy by model year 2020 and established the Advanced Technology Vehicles Manufacturing (ATVM) loan program in the Department of Energy (DOE). ATVM is to provide up to \$25 billion in loans for more fuel-efficient vehicles and components. Congress also provided \$7.5 billion to pay the required credit subsidy costs—the government's estimated net long-term cost, in present value terms, of the loans. GAO was asked to review the ATVM program and agreed to (1) identify the steps DOE has taken to implement the program, (2) examine the program's progress in awarding loans, (3) assess how the program is overseeing the loans, and (4) evaluate the extent to which DOE can assess progress toward meeting its goals. GAO analyzed loan documents and relevant laws and regulations and interviewed DOE and ATVM officials.

#### What GAO Recommends

To help ensure the effectiveness and accountability of the ATVM program, GAO recommends that DOE accelerate its efforts to engage the engineering expertise needed for effective technical oversight and develop sufficient, quantifiable performance measures for its program goals. DOE disagreed with GAO's recommendations. GAO continues to believe DOE should engage expertise and reaffirms its recommendation that DOE develop sufficient performance measures.

#### What GAO Found

DOE has taken several steps to implement the ATVM program. First, it set three goals: increase the fuel economy of U.S. passenger vehicles as a whole, advance U.S. automotive technology, and protect taxpayers' financial interests. DOE also set technical, financial, and environmental eligibility requirements. In addition, DOE established criteria for judging the technical and financial merits of applicants and projects deemed eligible, and policy factors to consider, such as a project's potential for supporting jobs. DOE established procedures for ATVM staff, aided by experts from within and outside DOE, to score applicants and projects. Finally, the Credit Review Board, composed of senior DOE officials, uses the scores and other information to recommend loan decisions to the Secretary of Energy.

The ATVM program has made \$8.4 billion in loans that DOE expects to yield fuel economy improvements in the near term along with greater advances, through newer technologies, in years to come. Although the loans represent about a third of the \$25 billion authorized by law, the program has used 44 percent of the \$7.5 billion allocated to pay credit subsidy costs, which is more than was initially anticipated. These higher credit subsidy costs were, in part, a reflection of the risky financial situation of the automotive industry at the time the loans were made. As a result of the higher credit subsidy costs, the program may be unable to loan the full \$25 billion allowed by statute.

Although the ATVM program has set procedures for overseeing the financial and technical performance of borrowers and has begun oversight, it has not yet engaged engineering expertise needed for technical oversight. To oversee financial performance, staff review data submitted by borrowers on their financial health to identify challenges to repaying the loans. Staff also rely on outside auditors to confirm whether funds have been used for allowable expenses. To oversee technical performance, ATVM staff analyze information borrowers report on their technical progress and are to use outside engineering expertise to supplement their analysis. According to our review, projects needing additional technical oversight are under way and the ATVM staff lack the engineering expertise called for by the program's procedures for adequately overseeing technical aspects of the projects. However, the program has not yet engaged such expertise. As a result, DOE cannot be adequately assured that the projects will be delivered as agreed.

DOE has not developed sufficient performance measures that would enable it to fully assess the extent to which it has achieved its three program goals. For example, while DOE has a measure for assessing specifically the fuel economy gains for the vehicles produced under the program, the measure falls short of enabling assessment of progress in achieving DOE's broad goal of improving the fuel economy of U.S. passenger vehicles as a whole because it does not account for, among other things, the fuel economy improvements manufacturers would have made, in the absence of the loans, to remain in compliance with increasingly strict federal fuel economy requirements. Principles of good governance call for performance measures tied to goals as a means of assessing the extent to which goals have been achieved.

View GAO-11-145 or key components.  
For more information, contact Frank Rusco at  
(202) 512-3841 or ruscof@gao.gov.

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#### Abbreviations

|       |  |
|-------|--|
| ATVM  | Advanced Technology Vehicles Manufacturing       |
| CAFE  | corporate average fuel economy                   |
| CBO   | Congressional Budget Office                      |
| DOE   | Department of Energy                             |
| EERE  | Office of Energy Efficiency and Renewable Energy |
| EISA  | Energy Independence and Security Act             |
| EPA   | Environmental Protection Agency                  |
| GPRA  | Government Performance and Results Act           |
| mpg   | miles per gallon                                 |
| mpgge | miles per gallon of gasoline equivalent          |
| NEPA  | National Environmental Policy Act                |
| NHTSA | National Highway Traffic Safety Administration   |
| OMB   | Office of Management and Budget                  |
| PSAT  | Powertrain System Analysis Toolkit               |

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United States Government Accountability Office  
Washington, DC 20548

February 28, 2011

The Honorable Dianne Feinstein  
Chairman  
The Honorable Lamar Alexander  
Ranking Member  
Subcommittee on Energy and Water Development  
Committee on Appropriations  
United States Senate

In recent years, concern about fluctuations in gasoline prices, along with worries about the environmental impact of petroleum use, such as increasing greenhouse gases, has prompted Congress to take steps aimed at making passenger vehicles in use in the United States more fuel-efficient. In December 2007, Congress enacted the Energy Independence and Security Act (EISA), which made the nation's corporate average fuel economy (CAFE) standards for newly manufactured passenger vehicles more stringent by requiring significant increases in the fuel economy of the vehicles being sold in the United States by 2020. In addition, EISA authorized, but did not provide funding for, the Advanced Technology Vehicles Manufacturing (ATVM) loan program, to provide loans for projects to produce more fuel-efficient passenger vehicles and their components.<sup>1</sup> The fiscal year 2009 continuing resolution appropriated \$7.5 billion from which the Department of Energy (DOE) is to pay the program's credit subsidy costs to support up to \$25 billion in direct loans to manufacturers of passenger vehicles and their components. Credit subsidy costs are the estimated net long-term costs to the government, in present value terms, of loans over the entire period the loans are outstanding.<sup>2</sup> In November 2008, DOE received and began to review the program's first loan applications. In December 2008, under the Troubled Asset Relief Program, the United States entered into loan agreements with two of the major U.S. automakers—Chrysler Group, LLC and General Motors Corporation—to provide \$62 billion in restructuring loans. In

---

<sup>1</sup>In Section 136 of EISA, Congress also authorized the ATVM program to make grants, but to date, this has not been funded.

<sup>2</sup>Credit subsidy costs exclude administrative costs and any incidental effects on governmental receipts or outlays. Present value is the worth of the future stream of returns or costs in terms of money paid immediately. In calculating present value, prevailing interest rates provide the basis for converting future amounts into their "money now" equivalents.

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addition, in May 2009 the Administration announced its National Fuel Efficiency Policy, which, to implement the increase in fuel economy required by EISA, called for higher CAFE standards for model years 2012 through 2016 for passenger cars and light-duty trucks—surpassing those EISA required by 2020. On April 1, 2010, the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) made final the rule putting the more stringent CAFE standards in place.<sup>3</sup>

In this context, you asked us to review the ATVM loan program. Specifically, our objectives were to (1) identify the steps DOE has taken to implement the ATVM loan program, (2) examine the ATVM program's progress in awarding loans, (3) assess how the program is overseeing the loans, and (4) evaluate the extent to which DOE can assess its progress toward meeting program goals. To address these objectives, we analyzed relevant legislation and regulations, Office of Management and Budget (OMB) guidance on federal loan programs, our prior work on implementing the Government Performance and Results Act (GPRA),<sup>4</sup> federal standards for internal control,<sup>5</sup> and DOE's program guidance. In addition, we analyzed information on applicants and documents DOE decision makers used to select borrowers. We also reviewed the loan agreements DOE had executed as of February 24, 2011. We analyzed DOE data on the expected fuel economy of vehicles to be produced by projects funded by ATVM loans and compared them with data on future regulatory requirements; we examined documentation on DOE's model and its process for generating these data—we believe the data to be sufficiently reliable for our purposes. In addition, we interviewed relevant DOE officials. We did not evaluate the technical or financial soundness of the projects that DOE considered for loans. We conducted this performance audit from September 2009 through February 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions

---

<sup>3</sup>EPA is responsible for developing and executing CAFE testing and calculation procedures. NHTSA uses EPA data to determine if a manufacturer's fleet is in compliance for a given model year. The final rule was published in the *Federal Register* on May 7, 2010.

<sup>4</sup>GAO, *Effectively Implementing the Government Performance and Results Act*, GAO/GGD-96-118 (Washington, D.C.: June 1996).

<sup>5</sup>GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

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based on our audit objectives. We believe that the evidence obtained does so. A further discussion of the scope of our review and the methods we used is presented in appendix I.

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## Background

In recent years, concerns have arisen about fluctuations in gasoline prices and the environmental impact of petroleum use. For example, the price of gasoline increased significantly from 2002 to 2008, negatively affecting consumers, domestic automakers, and the U.S. economy in general. In addition, gasoline-fueled passenger vehicles are a major source of greenhouse gas emissions, and public concern has grown about the relationship between their greenhouse gas emissions and global climate change. According to our analysis of EPA data, passenger cars and light-duty trucks are responsible for a significant share of greenhouse gas emissions in the United States—in 2007, their use accounted for 18 percent of total greenhouse gas emissions. In light of these concerns, in 2007, Congress enacted EISA, which, among other things, increased CAFE standards, requiring that the nation's automobile manufacturers' new vehicle fleets attain at least an average of 35 miles per gallon by 2020.

In addition to increasing CAFE standards, EISA also authorized, but did not provide funding for, the ATVM loan program to provide up to \$25 billion in loans to support projects to produce more fuel-efficient passenger vehicles and components. Loans made under the program are to be disbursed by the Federal Financing Bank,<sup>6</sup> have an interest rate equal to the government's cost of funds,<sup>7</sup> and be in force for a period of 25 years or the projected life of the eligible project, whichever is less. Congress also required that DOE, when making loans to manufacturers with existing facilities, among other things, give priority to those facilities that are the oldest or are at least 20 years old.

In addition to the negative effect that rising fuel prices had on domestic automobile sales, the economic recession that began in late 2007 particularly affected the three major domestic automakers—Chrysler Group, LLC; Ford Motor Company; and General Motors Corporation—

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<sup>6</sup>The Federal Financing Bank is a government corporation, created by Congress, under the supervision of the Department of the Treasury.

<sup>7</sup>The government's cost of funds is the interest cost that the federal government must pay for the use of the money it lends to ATVM borrowers—that is, the interest rate on Treasury notes at the time the funds are disbursed.



known as the Detroit 3. Rising fuel prices had negatively affected the sales of domestic automakers as consumers shifted to smaller, more fuel-efficient vehicles and away from less fuel-efficient light trucks and sport utility vehicles. At the end of 2008, several economic indicators, including economic growth and the unemployment rate, worsened while credit markets tightened and dampened consumers' demands for new passenger vehicles. Sales of new vehicles had been trending downward since 2006, but the decrease was markedly sharper in 2008 and 2009. For example, U.S. sales for the Detroit 3 dropped by 49 percent from February 2008 through February 2009, whereas U.S. sales for American Honda Motor Co., Inc.; Nissan North America, Inc.; and Toyota Motor North America, Inc., dropped 39 percent during this period. Additionally, the Detroit 3 had been losing U.S. market share to foreign automakers for several years. For instance, General Motors' U.S. market share for total light vehicle retail sales—including passenger cars and light-duty trucks—fell from 27.2 percent in 2004 to 22.1 percent in 2008, while the market share of Japanese auto manufacturers grew from 29.8 percent to 38.9 percent during the same period. Furthermore, since the 1980s, the Detroit 3 have relied heavily on sales of light-duty trucks and sport utility vehicles, which were more profitable than passenger cars but had relatively low fuel economy ratings. As a result of this reliance, the Detroit 3 faced more difficulty in achieving substantial improvements in fuel economy than most foreign-based manufacturers, which historically had produced and sold more fuel-efficient vehicles. When proposing the new, more stringent CAFE standards, NHTSA estimated that the Detroit 3 would face significantly higher costs to meet revised standards than the major Japanese automakers.

In September 2008, the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act provided \$7.5 billion to DOE to pay the credit subsidy costs of up to \$25 billion in ATVM loans.<sup>8</sup> Congress also provided \$10 million to DOE to administer the ATVM loan program and required that DOE issue an interim final rule to establish regulations necessary to implement the program. DOE issued an interim final rule for implementing the program in November 2008.

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<sup>8</sup>The Federal Credit Reform Act of 1990 requires that the credit subsidy costs of federal loan programs be paid; for the ATVM program, they are paid by congressional appropriations.

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## DOE Established Program Goals and Set Criteria for Applicant and Project Eligibility and Merit

To implement the ATVM program, DOE established three goals and set, in its interim final rule, certain technical and financial criteria and environmental requirements that vehicle and component manufacturers must meet to qualify to receive a loan under the program. DOE also established criteria for determining the technical and financial merits of projects once they have been deemed eligible.

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## DOE Established Three Goals for the ATVM Program

Although DOE documents do not specifically identify the goals of the ATVM loan program, DOE officials told us that they established three broad goals for the program:

- increase the fuel economy of U.S. passenger vehicles as a whole,
- advance automotive technology in the United States, and
- protect taxpayers' financial interests.

According to DOE officials, the program's first goal is to increase the fuel economy of U.S. passenger vehicles as a whole. Specifically, EISA calls for the program to make loans to provide funding to automobile manufacturers and component suppliers for projects that re-equip, expand, or establish manufacturing facilities in the United States for the purpose of building more fuel-efficient passenger cars and light-duty trucks. According to DOE's 2011 budget submission, the first and second goals support the agency-level goal to build a competitive, low-carbon economy by, among other things, funding vehicles that reduce the use of petroleum-derived fuels and accelerating growth in advanced automotive technology manufacturing. According to DOE officials, the program's third goal is to protect taxpayers' financial interests. This goal reflects EISA's requirement that loans are to be made to financially viable borrowers. Specifically, ATVM's interim final rule states that the program should make loans only to borrowers who have a reasonable prospect of repaying the loan. According to the Executive Director for DOE's Loan Programs Office, whom we interviewed about ATVM as well as the office's loan guarantee programs, identifying applicants with projects for innovative technologies and strong prospects of repaying a loan is particularly difficult because innovative technologies are typically more risky than established technologies.

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## DOE Set Criteria to Determine Eligibility for Loans

DOE set technical and financial criteria and environmental requirements in its interim final rule that applicants and their projects must meet to be eligible for an ATVM loan.<sup>9</sup>

## Technical Eligibility Criteria for Applicants and Their Projects

To ensure that applicants meet the minimum fuel economy improvement thresholds specified by EISA, DOE established a technical eligibility criterion for vehicle manufacturers. An established vehicle manufacturer—that is, a manufacturer that produced passenger vehicles in model year 2005—must demonstrate that the adjusted average fuel economy of the fleet of vehicles it produced for the most recent model year is at least equal to the adjusted average fuel economy of the fleet it produced in model year 2005.<sup>10</sup> An applicant that is not an established manufacturer—that is, one that did not produce vehicles in 2005—must demonstrate that the fuel economy of its proposed vehicles will at least equal the adjusted average fuel economy of established manufacturers' model year 2005 vehicles in the same vehicle class.

For applicants deemed eligible, DOE also used statutory-based technical criteria that a project must meet to be eligible for a loan under the program:

- a proposed passenger vehicle must meet the fuel economy and emissions requirements set forth in the definition of an advanced technology vehicle, and a proposed component must be designed for a specific advanced technology vehicle;
- a proposed passenger vehicle or component must be designed or manufactured in the United States; and
- applicants' proposed projects must meet federal prevailing wage requirements for facility construction, alteration, and repair.<sup>11</sup>

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<sup>9</sup>DOE evaluates proposed projects individually. Applicants may submit loan requests for multiple projects in a single application, but each proposed project must include all necessary information specific to that project.

<sup>10</sup>The interim final rule defines the "most recent" year as the year for which the most recent CAFE compliance data are available. DOE defines "adjusted average fuel economy" as the average of the combined CAFE fuel economy ratings—adjusted by production volume—of all the relevant vehicles in a manufacturer's vehicle fleet.

<sup>11</sup>The federal prevailing wage requirements, commonly known as Davis-Bacon requirements, are codified at 40 U.S.C. §§ 3141-3148 and apply to borrowers, contractors and subcontractors.

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For a project to meet the first criterion, a proposed vehicle, or a vehicle in which a proposed component will be used, must meet the fuel economy and emissions requirements for an advanced technology vehicle as defined in EISA. EISA specifies that the vehicle, when produced, must achieve at least 125 percent of the average fuel economy for all manufacturers' vehicles with substantially similar attributes in a base year. The vehicle must also meet EPA emissions standards in effect at the time the vehicle is manufactured.<sup>12</sup> Conventional vehicles—that is, vehicles powered primarily by gasoline-fueled internal combustion engines like those in wide use in the United States today—can be considered advanced technology vehicles under the law if they meet the fuel economy and emissions requirements. In addition, vehicles with newer technologies—including conventional hybrid vehicles, such as those that are powered by both gasoline and a battery that is charged during driving; plug-in hybrid vehicles, such as those that are powered by both gasoline and a battery that is charged using an electrical outlet; and all-electric vehicles, such as those powered by plug-in batteries alone—can be considered advanced technology vehicles under the law. The interim final rule calls for component projects to identify the specific advanced technology vehicles in which the proposed components will be installed. According to its interim final rule, DOE chose 2005 as the base year because, among other reasons, model year 2005 CAFE compliance fuel economy data for all manufacturers' vehicles were fully available when the interim final rule was published, and using model year 2005 as the base year “would promote efficient and effective administration” of the program and would be consistent with the technical eligibility criterion for vehicle manufacturers set forth in EISA. To help the program determine whether vehicles share “substantially similar attributes,” the interim final rule set out vehicle classes based on vehicle size and horsepower. DOE based these classes largely on EPA's vehicle classes for 2005, which are size-based.

For a project to meet the second technical eligibility criterion, the interim final rule calls for proposed vehicles or components to be either designed or manufactured in the United States. Furthermore, DOE set limits on the types of design activities—that is, engineering integration—that may be paid for using ATVM loan funds. In general, engineering integration involves the design and layout of production processes necessary to implement and build a new vehicle or component, according to the ATVM

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<sup>12</sup>Pub. L. No 110-140, § 136(a), 121 Stat. 1492, 1514 (2007), *codified at* 42 U.S.C. § 17013.

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Director. The interim final rule allows two engineering integration activities: incorporating qualifying components into the design of an advanced technology vehicle and designing and developing production facilities for producing qualifying components or vehicles.

Because of their technical expertise, staff in DOE's Office of Energy Efficiency and Renewable Energy (EERE) are responsible for determining whether applicants and proposed projects have met the program's technical eligibility criteria. EERE staff perform most of the technical eligibility analysis; for example, EERE staff determine whether the adjusted average fuel economy of an applicant's current production fleet is at least equal to the adjusted average fuel economy of the applicant's comparable fleet in model year 2005. In addition, EERE staff rely on the Argonne National Laboratory to analyze applicant-provided data using a computer model developed by the laboratory. The model estimates the miles per gallon (mpg) that a proposed vehicle is likely to achieve.<sup>13</sup> EERE uses the results to determine whether the vehicle meets the program's fuel economy eligibility criterion. According to EERE staff, laboratory staff test one vehicle per project. In the case of a single-vehicle project, laboratory staff analyze data provided for that vehicle alone. For projects for which the borrower plans to produce multiple variations of a vehicle, the applicant provides data on a vehicle it has deemed to be "representative" of those it plans to produce under the project.<sup>14</sup> Our review of DOE's test results and approved loan documents indicated that, in the event that the project is approved for a loan, the vehicles produced may or may not have the same specifications as the representative vehicle. According to EERE staff, to judge whether the variations of the vehicle that were not modeled are likely to meet the program's fuel economy eligibility criterion, the staff compare applicant-submitted data on the expected mpgs of those variations with that eligibility criterion.

#### Financial Eligibility Criteria for Applicants

Applicants must also demonstrate financial viability to be selected for an ATVM loan. According to DOE's interim final rule, an applicant is financially viable if it has (1) a reasonable prospect of repaying principal

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<sup>13</sup>To determine the expected fuel economy of proposed vehicles, DOE laboratory staff analyze applicant-provided data on the specifications of a proposed vehicle using the Powertrain System Analysis Toolkit, which DOE uses as its primary fuel-efficiency simulation tool for a number of vehicle-related projects.

<sup>14</sup>Manufacturers may produce multiple versions of a model within a project that have varying technical specifications—that is, for a sedan model, manufacturers might plan to produce versions with automatic and manual transmissions that vary in their fuel economy.

and interest in accordance with the proposed loan terms and (2) a positive net present value—that is, estimated flow of future income exceeds estimated flow of future costs when discounted and expressed in today's dollars. Furthermore, by law, for the purpose of determining its financial viability, a selected applicant must not receive any additional federal funding associated with the proposed project.

To determine whether an applicant has a reasonable prospect of repayment, ATVM staff are to analyze an applicant's current financial condition and develop a projection of its ability to repay the loan over time. Specifically, ATVM staff are to analyze an applicant's liquidity and debt-to-equity ratio at the time of the application, as well as the applicant's balance sheet and income statements. ATVM staff then build on this financial analysis to examine an applicant's prospect of repayment by determining an applicant's net present value. ATVM staff use an applicant's projected cash flows and underlying assumptions, as well as the state of the automotive industry, to make a net present value determination. The ATVM program uses accounting and market analysis firms to help with its financial analysis, according to ATVM officials. For example, the market analysts assess whether an applicant's likely production volume and sales projections are realistic given overall market conditions. ATVM officials also told us the firms perform cost analyses to help verify the costs of proposed projects.

#### Environmental Eligibility Requirements for Projects

To comply with the National Environmental Policy Act (NEPA),<sup>15</sup> DOE requires that ATVM applicants submit three environmental impact reports for each project they propose. Specifically, applicants are to submit reports on the following:

- the likely *environmental impacts* of the project, including the construction and operation of the facilities to be associated with it;
- the likely *socioeconomic impacts* of constructing and operating the proposed project, including the likely effects on nearby towns and counties; and

<sup>15</sup>Under NEPA, federal agencies evaluate the likely environmental effects of projects that are proposed using an environmental assessment or, if projects are likely to significantly affect the environment, a more detailed environmental impact statement. See 42 U.S.C. §§ 4332(2)(C), (E).

- a comparison of the environmental impacts proposed in the first report with *alternatives to the project*, including a comparison of the environmental benefits and costs with the economic benefits and costs.

Depending on the proposed activities, applicants may have to take additional steps to mitigate the potential environmental impacts of their projects. If, however, applicants demonstrate minimal impacts, these reports may satisfy the NEPA requirements. For example, a project may be “categorically excluded” from a more detailed environmental analysis if it falls within a category of activities that a federal agency has previously determined has no significant environmental impact. To determine whether applicants meet the NEPA requirements for a categorical exclusion or whether additional analysis and, perhaps, mitigation are needed, specialists in DOE’s NEPA office review ATVM applicants’ environmental impact reports. They then share the results of their review with the ATVM Director and staff.

### DOE Also Set Criteria for Determining Eligible Projects’ Technical and Financial Merits

To help choose among applicants and projects deemed eligible, DOE also considers their technical and financial merits. According to DOE officials, to determine technical merit, at least three experts from EERE or the DOE national laboratories individually review each project according to four criteria and provide written documentation of the strengths and weaknesses in each area. The technical merit criteria, as specified in the program’s procedures, are (1) improved vehicle fuel economy; (2) contribution to improved fuel economy of passenger vehicles in use in the United States; (3) promotion of the use of advanced fuels (e.g., electricity and ultra-low sulfur diesel); and (4) reductions in petroleum use by the passenger vehicles in use in the United States. After the individual reviews, the experts must agree on a single final merit score. To the extent that a project exceeds the fuel economy eligibility threshold for its vehicle class, the project receives a correspondingly higher technical merit score.

According to program procedures for determining financial merit, the ATVM program staff score an applicant on the basis of its likely ability to repay a loan. As part of this effort, the Credit Division—a separate group within DOE’s Loan Programs Office—reviews the financial soundness of applicants and their projects, producing both a credit rating for applicants and an estimate of the applicants’ credit subsidy cost.<sup>16</sup> ATVM staff rank an

<sup>16</sup>The ATVM program’s credit rating for applicants is based, in part, on any publicly available credit ratings.

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applicant's financial merit by considering (1) the credit rating generated by the Credit Division, (2) the Credit Division's estimated credit subsidy cost and the proportion that cost represents of the funds available to the program for paying credit subsidy costs, and (3) the loan's credit subsidy rate, which is the ratio of the loan's credit subsidy cost to the total amount of the loan. A loan with a relatively low credit subsidy rate is considered the most desirable. The Credit Division briefs OMB on its analysis and its credit subsidy cost estimate for each applicant. OMB then reviews this analysis and produces the final credit subsidy cost for the ATVM applicant.

In addition, the ATVM staff told us they gather information on how applicants and their projects address six additional "policy factors":

- a project's potential impact on the local economy, such as job creation or job preservation;
- whether a project is likely to advance automotive technology;
- an applicant's significance to the overall well-being of the automotive industry;
- the risk that an applicant may not be able to complete a proposed project, including difficulty in translating plans for innovative technology into manufactured vehicles and components;
- the geographic location that will be affected by a proposed project; and
- the age of any facilities that would be improved with the loan proceeds.

The ATVM staff provide the information to the Credit Review Board, a group composed of senior DOE officials charged with overseeing the ATVM program and making recommendations to the Secretary of Energy on whether to award ATVM loans.<sup>17</sup> Finally, the program's procedures call for the Credit Review Board to weigh an applicant's technical and financial merit scores, the credit subsidy cost approved by OMB, the six policy factors, and other information, such as a summary of the financial

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<sup>17</sup>Prior to the review by the Credit Review Board, the Credit Committee—a group composed of the Director of the Loan Guarantee Program and senior staff of the Chief Financial Officer's Office—reviews the financial analysis and makes recommendations to the Director of the ATVM program and the Credit Review Board on whether to award loans.



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analysis, to decide whether to recommend that the Secretary of Energy award a loan.

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## The ATVM Program Has Awarded \$8.4 Billion in Loans That Largely Enhance Conventional Vehicle Technology, but the Program May Be Unable to Lend the Full Authorized Amount

The loan funds the ATVM program has awarded largely enhance conventional vehicle technology and, according to DOE, are expected to result in improved fuel economy. The remainder of the funds support vehicles with newer technologies—specifically, conventional hybrid vehicles, plug-in hybrid vehicles, and all-electric vehicles—that are also expected to result in improved fuel economy. In addition, DOE officials cited other benefits that could result from the projects. The loans the ATVM program has made to date have used almost half of the \$7.5 billion available to pay credit subsidy costs. At this rate, the program may not be able to provide the full \$25 billion in loans allowed by statute.

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## The Loan Funds Largely Support Projects for Enhancing Conventional Vehicle Technology, with the Remainder Supporting Newer Technologies

Of the about \$8.4 billion in loans the ATVM program has awarded to date, \$5.9 billion went to the Ford Motor Company; \$1.4 billion to Nissan North America; \$529 million to Fisker Automotive, Inc.; and \$465 million to Tesla Motors, Inc.<sup>18</sup> About \$5.2 billion—62 percent of the loan funds awarded so far—is for projects that largely enhance the technologies of conventional vehicles powered by gasoline-fueled internal combustion engines. These projects include such fuel-saving improvements as adding assisted direct start technology to conventional vehicles, which reduces fuel consumption by shutting off the engine when the vehicle is idling (e.g., while at traffic lights) and automatically restarting it with direct fuel injection when the driver releases the brake. According to DOE's analysis, the projects will result in vehicles with improved fuel economy that will contribute in the near term to improving the fuel economy of the passenger vehicles in use in the United States as a whole because the conventional vehicles are to be produced on a large scale relatively quickly and offered at a price that is competitive with other vehicles being offered for sale. We are not reporting details on DOE's expectations for production of the enhanced

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<sup>18</sup>Loan amounts awarded to each company do not add up to the total loan amount the ATVM program awarded to date because of rounding.

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conventional vehicles or those vehicles' expected prices because of concerns raised by Ford about the proprietary nature of this information.

DOE used data from the borrowers in its modeling software—the Powertrain System Analysis Toolkit (PSAT)—to estimate the fuel economy of the vehicles being considered for ATVM loans. For conventional vehicles and conventional hybrid vehicles, fuel economy was estimated in terms of mpg. For all-electric and plug-in hybrid vehicles, fuel economy was estimated in terms of the number of miles the vehicles can drive with the energy equivalent of one gallon of gasoline. The PSAT model, in an effort to be consistent with CAFE mpg ratings (which are calculated after vehicles have been produced), estimates a vehicle's fuel economy using two drive-cycle tests—commonly referred to as the Highway and City tests. EPA's CAFE mpg ratings are typically higher than its ratings that appear on new car window stickers, in part because, since 2008, the window sticker ratings have been calculated using three additional drive-cycle tests—commonly referred to as the High Speed, Air Conditioning, and Cold Temperature tests. Furthermore, EPA has not yet made final a standard calculation for reporting the fuel economy of plug-in hybrids and all-electric vehicles. EPA expects to issue a regulation standardizing fuel economy calculations for plug-in hybrid and all-electric vehicles that it will use when reporting the estimated fuel economy of new vehicles to the public, such as on a new car's window sticker.

According to our calculations using DOE's modeled estimates of fuel economy, the projects for enhanced conventional vehicles are expected to result in vehicles with improved fuel economy that exceed both the program's eligibility requirements and the CAFE targets that will be in place at the time the vehicles are produced.<sup>19</sup> We calculated the extent to which the vehicles are expected to exceed the program's fuel economy eligibility requirements by comparing DOE's estimated fuel economy for the vehicles it used to establish the projects' eligibility for the program to the fuel economy of the comparable vehicle class for model year 2005. Taken together, the average expected fuel economy of the enhanced conventional vehicle projects is 33.5 mpg. This is about 42 percent better

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<sup>19</sup>The CAFE standards for 2012 to 2016 will subject passenger cars and light trucks to target levels of fuel efficiency based on the vehicles' "footprints." A vehicle's footprint is a measure of its size calculated by multiplying its wheelbase (the distance from the center of the front wheels to the center of the rear wheels) by its average track width (the average of the width between the two front wheels and the width between the two rear wheels). The vehicle-level mpg targets generally become more stringent with each new model year.

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than the average 2005 baseline of 23.6 mpg for the respective vehicle classes and exceeds the 25 percent improvement over the 2005 baseline required to be eligible for the program.<sup>20</sup> We also used DOE's fuel economy estimates to calculate the extent to which the funded vehicles are expected to exceed the CAFE targets that will be in place at the time the vehicles are produced. According to our calculations, the projects for enhanced conventional vehicles as a whole are expected to achieve fuel economy that exceeds the CAFE targets by, on average, 21 percent.

The remaining funds—\$3.1 billion, or about 38 percent of the \$8.4 billion—support projects for vehicles and components with newer technologies. Fisker has received a loan for two plug-in hybrid projects: the Karma, a sedan classified by DOE as a subcompact-performance sedan at the time its eligibility was established; and the Nina, classified by DOE as a subcompact sedan.<sup>21</sup> Tesla received a loan to manufacture an all-electric midsize sedan, the Model S, and Nissan received a loan to manufacture an all-electric vehicle, the LEAF, classified by DOE as a small wagon at the time its eligibility was established.<sup>22</sup> Finally, a portion of the loan to Ford supports projects for manufacturing conventional hybrid and all-electric vehicles. In addition, there are two advanced technology components projects: Nissan has a project to build a manufacturing facility to produce batteries for the LEAF and potentially other vehicles, and Tesla has a project to build a manufacturing facility to produce electric battery packs, electric motors, and electric components for the Tesla Roadster and vehicles from other manufacturers. In contrast to the projects supporting enhancements to conventional vehicles, DOE's and the borrowers' analyses indicate that the projects with newer technologies will result in vehicles with far greater fuel economy gains per vehicle but that these

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<sup>20</sup>We calculated harmonic averages, which are often used for determining the average of a set of rates, such as, in this case, mpgs. DOE used harmonic averages to calculate the combined average fuel economy for its vehicle classes under the ATVM interim final rule.

<sup>21</sup>For the purpose of establishing eligibility, DOE used the classifications in the interim final rule. According to Fisker officials, while these classifications accurately reflect the vehicles' footprints and are appropriate for judging the fuel economy of the vehicles, the classifications do not accurately reflect the type of vehicles to be produced by Fisker under the program. More specifically, the officials characterized the Karma as a "premium-luxury sedan" and the Nina as a "near-luxury performance sedan," noting that vehicles that are known in the industry as "subcompacts" generally are not luxury vehicles.

<sup>22</sup>Nissan officials told us that the LEAF that will be produced will be a midsize sedan, differing slightly from the design classified by DOE as a small wagon that was used to establish eligibility. DOE's projected fuel economy for the LEAF also exceeds the eligibility requirements for the midsize sedan classification.

vehicles will be sold in smaller volumes, thereby having a less immediate impact on the fuel economy of total U.S. passenger vehicles. For example, DOE's analysis estimates that the Fisker Nina subcompact sedan will achieve the equivalent of about 111 mpg. Fisker has stated production of the Nina will begin in late 2012, with expected production capacity of 70,000 to 100,000 vehicles per year. The Fisker Karma is estimated by DOE to achieve fuel economy that is the equivalent of 86 mpg. Fisker has stated that production of the Karma will begin in 2011 and that the company will have a production capacity of 15,000 vehicles per year. The Karma has a base price of \$95,900, prior to any federal tax credit. Similarly, DOE's analysis estimates that the Tesla Model S will achieve the equivalent of about 111 mpg, with production planned to begin in 2012. According to Tesla officials, the company plans to produce as many as 7,000 vehicles in 2012 and up to 20,000 vehicles per year thereafter. In addition, DOE's analysis indicates that the Nissan LEAF is estimated to achieve the equivalent of about 165 mpg.<sup>23</sup> The LEAF is currently listed to sell for about \$33,000 each, and Nissan has accepted 20,000 reservations for the vehicle in the United States.<sup>24</sup> The company expects to have a production capacity in the United States of 150,000 vehicles per year once the ATVM-funded manufacturing facility, scheduled to open in 2012, reaches full capacity in 2015. Finally, for Ford, we are not reporting information on expected production levels or prices for conventional hybrids or all-electric vehicles to be produced with ATVM loan funds because the company is concerned about the proprietary nature of this information.

According to our calculations, the projects for vehicles with newer technologies, like the projects for enhanced conventional vehicles, are expected to result in improved fuel economy that exceeds the program's eligibility requirements, as well as CAFE targets. The average expected fuel economy of the vehicles with newer technologies is 78.1 mpg. This is about 181 percent better than the average 2005 baseline of 27.8 mpg for the respective vehicle classes and exceeds the 25 percent improvement over

<sup>23</sup>Nissan has announced that EPA has approved a fuel economy window sticker for the LEAF for model year 2011 with a rating of the equivalent of 99 miles per gallon of gasoline equivalent (mpgge), resulting from the five-cycle testing regimen EPA is using until it makes final its regulation.

<sup>24</sup>For sales occurring after December 31, 2009, the cost to consumers of plug-in hybrid vehicles and all-electric vehicles is reduced by a federal tax credit ranging from \$2,500 to \$7,500, depending on the battery capacity of the vehicle. The credit begins to phase out for a manufacturer after it has sold at least 200,000 qualifying vehicles for use in the United States.

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the baseline required to be eligible for the program. Using DOE's fuel economy estimates to calculate the extent to which the funded vehicles are expected to exceed the CAFE targets that will be in place at the time the vehicles are produced, we calculated that the vehicles' fuel economy is expected to be about 161 percent better than the 29.9 mpg CAFE target average for the respective vehicles.

The extent to which DOE's and borrowers' projections of gains in fuel economy and reductions in petroleum use will prove accurate depends on a number of factors. These include the borrowers' ability to overcome technical challenges they may face in producing vehicles that achieve the intended fuel economy gains and the extent to which the vehicles are sold in numbers that meet the initial projections, which itself depends largely on whether consumers consider the vehicles to be competitive in price and costs to operate when compared with vehicles offered by competitors, including conventional vehicles and those with newer technologies. Moreover, the extent to which the vehicles that are sold actually replace older vehicles currently on the road will affect the accuracy of the projected gains in fuel economy and reductions in petroleum use; similarly, how much consumers use the new vehicles compared to their use of the replaced vehicles will affect the accuracy of the estimates.

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**DOE Officials Also Cited Benefits Other than Improved Fuel Economy That Projects Could Provide**

In addition to improved fuel economy, ATVM program staff identified other potential benefits projects could provide. Benefits cited by the program staff include the geographic location of proposed projects—that is, whether a project would benefit an area that had not otherwise received funding under the program—and the potential impact of the projects in creating or sustaining economic development—in particular, creating or sustaining jobs (see table 1). In the case of Fisker, the program staff also identified the extent to which the company's projects would support U.S. parts suppliers, noting that over 65 percent of the parts for Fisker's Karma are expected to come from U.S. parts suppliers.

**Table 1: ATVM Loan Program Expectations of Jobs to Be Created or Preserved and Their Locations**

| <b>Borrower</b> | <b>Locations of facilities funded by ATVM loans</b>              | <b>Borrowers' estimates of jobs created or preserved</b> |
|-----------------|--|--|
| Ford            | 13 factories in Illinois, Kentucky, Michigan, Missouri, and Ohio | 33,000   |
| Nissan          | 2 factories in Tennessee   | 1,300  |
| Fisker          | 1 factory in Delaware  | 2,000  |
| Tesla           | 2 factories in California  | 1,500  |
| <b>Total</b>    |  | <b>37,800</b>  |

Source: ATVM analysis of borrower data.

ATVM program officials also noted other benefits the projects could provide after the loans had been awarded. For example, the ATVM Director stated that awarding loans to all-electric vehicle manufacturers has influenced major automakers to enter the advanced automobile technology market in order to remain competitive. Specifically, he noted that the recently announced partnership between Tesla and Toyota to build components for all-electric vehicles may have been encouraged by the ATVM loan to Nissan supporting the all-electric LEAF. Additionally, DOE has announced that Nissan is forming partnerships with states, counties, cities, and electric utilities to install charging stations needed to introduce and sustain all-electric vehicles.

Moreover, ATVM officials noted that all of the funded projects could result in environmental benefits—for example, by reducing petroleum consumption, they could reduce emissions of greenhouse gases and air pollutants. However, the extent of the environmental benefits will depend a number of factors, including the number and type of ATVM-funded vehicles consumers buy, the number and type of vehicles currently on the road that consumers replace with the ATVM-funded vehicles produced, and the extent to which consumers use the new vehicles compared with the vehicles they replaced. These benefits will also depend on the vehicles that the borrowers actually deliver to the market. DOE's estimates of fuel-economy gains were calculated using the information the borrowers provided on the vehicles they plan to produce; however, the loan agreements allow the borrowers to alter their production plans for individual vehicles as long as the projects as a whole comply with the program's eligibility requirements.

Furthermore, consumers may be deterred from buying ATVM-funded vehicles if they are not competitive in terms of their purchase prices and

their costs to operate when compared with vehicles available from competitors, including conventional vehicles and those with newer technologies (such as all-electric vehicles) that were not funded by the ATVM program. The competitiveness of the three types of vehicles with newer technologies, in particular, will be determined largely by the cost of batteries and, for plug-in hybrid and all-electric vehicles, by trends in the price of gasoline relative to the price of electricity and the available infrastructure for charging batteries. Moreover, because the plug-in hybrid and all-electric vehicles rely on electricity, the extent to which they will reduce greenhouse gases and air pollution depends on, among other things, whether producing the electricity they use leads to fewer emissions of greenhouse gases and pollutants than the gasoline the electricity replaces. For example, hydroelectric plants produce significantly fewer greenhouse gases and pollutants than coal-burning plants. In June 2009, we reported on these and other issues related to consumer adoption and the environmental effects of advanced technology vehicles.<sup>25</sup>

**The ATVM Program Has Used about Half of the Funds Available to Pay Credit Subsidy Costs, Which May Limit the Program's Ability to Loan the Entire \$25 Billion Allowed by Statute**

In order to make loans, federal agencies are required by the Federal Credit Reform Act of 1990 to set aside the estimated net long-term costs of the loans to the government over the life of the loans in present value terms—that is, the loans' credit subsidy costs. In September 2008, the Congressional Budget Office (CBO) was tasked with determining the amount of funds needed by the ATVM program in order to pay the credit subsidy costs that would enable the program to award \$25 billion in loans—the full amount of the program's loan authority. CBO estimated that a total of \$7.5 billion would be needed to pay credit subsidy costs. This would amount to an average credit subsidy rate of 30 percent per loan (\$7.5 billion divided by \$25 billion equals 30 percent). In line with CBO's estimate, Congress appropriated \$7.5 billion to be used to pay credit subsidy costs for the ATVM program. However, the average credit subsidy rate for the \$8.4 billion in loans awarded as of February 24, 2011, was 39 percent—a total of roughly \$3.3 billion in credit subsidy costs. At this rate, the \$4.2 billion remaining to be used to pay credit subsidy costs will not be sufficient to enable DOE to loan the full \$25 billion in loan authority. For DOE to make loans that use all of the remaining \$16.6 billion in loan

<sup>25</sup>See GAO, *Federal Energy and Fleet Management: Plug-in Vehicles Offer Potential Benefits, but High Costs and Limited Information Could Hinder Integration into the Federal Fleet*, GAO-09-493 (Washington, D.C.: June 9, 2009).

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authority, the credit subsidy rate for the loans would have to average no more than 25 percent (\$4.2 billion divided by \$16.6 billion).

A primary reason for the high credit subsidy rate for the loans made thus far is that they were made at a time of particularly difficult economic conditions for the automotive industry. For example, in September 2008, by the time CBO made its credit subsidy cost estimate, Ford's credit rating was B-, indicating the company was more vulnerable to adverse business, financial, and economic conditions than higher-rated companies but had the capacity to meet its financial commitments.<sup>26</sup> However, when the ATVM program considered Ford's application in June 2009, Ford's credit rating had dropped to CCC+ as a result, in part, of the severe economic downturn. Since the ATVM loan recipients first applied to the program, the economic standing of the U.S. automotive industry has improved. For example, Ford's credit rating had risen to B+ in August 2010. The improved economic conditions within the industry suggest that the loans awarded to date might not have reached an average credit subsidy rate of 39 percent had their credit subsidy costs been determined at a more economically favorable time. The Federal Credit Reform Act of 1990 and OMB guidance call for initial credit subsidy rates to be updated or "reestimated" annually to reflect any changes in assumptions related to future loan performance, such as the recent changes in the economic conditions of the U.S. automotive industry. However, reestimates that result in lower credit subsidy costs do not return funds to the program—once funds for credit subsidy costs have been apportioned for a loan, they are no longer available to support other loans. Therefore, it remains unclear whether the ATVM program will have sufficient funds remaining to loan the full amount allowed by statute.

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<sup>26</sup>The credit rating was determined by Standard and Poor's.



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**The ATVM Program  
Has Begun  
Overseeing Loans to  
Ensure Borrowers  
Comply with  
Financial and  
Technical  
Requirements but Has  
Not Engaged  
Engineering Expertise  
That Would Help  
Ensure That Projects  
Are Delivered as  
Agreed**

ATVM program staff have set procedures and have begun using those procedures to oversee borrowers' compliance with the financial and technical requirements of the loans. ATVM staff share responsibility for financial oversight of the loans with external auditors engaged for that purpose. Although ATVM program procedures call for sufficient expertise to help oversee borrowers' compliance with the loans' technical requirements, the ATVM program has not yet engaged such engineering expertise and without it, cannot be sure that the projects are being delivered as agreed.

To help ensure that borrowers are complying with the financial requirements of the loans, the ATVM program calls for staff and external auditors to share oversight duties. ATVM officials developed monitoring procedures and a plan for each borrower that specifies the financial information to be collected and analyzed by ATVM staff. The ATVM program staff, as called for in the procedures and plans, oversee the loans' financial requirements by monitoring the financial health of borrowers to help identify potential challenges they might face in repaying the loans. To do this, ATVM staff analyze market trends and conditions that could affect the borrowers and information on the financial standing of the companies. For example, according to the procedures, ATVM staff collect and analyze information on market trends in the automobile industry that may affect the borrowers' liquidity, as well as analyze a variety of information provided by borrowers, such as their income statements, debt levels, changes to credit ratings, and the value of pledged collateral. If ATVM staff determine that a borrower is facing financial challenges but remains financially viable, they are to develop a plan for restructuring the loan, among other steps, to protect the investment. In the event that the steps fail and the borrower is deemed to be no longer financially viable, the ATVM program may foreclose on a loan if it concludes that doing so would offer the best protection of the taxpayers' financial interests.

The ATVM program is also using external auditors to oversee borrowers' financial performance by verifying that loan funds are being spent as intended, as called for by the program's procedures. To date, the auditors have reported instances in which three of the four borrowers did not spend funds as required, with, for example, two borrowers spending some loan funds outside the United States and the third spending some loan funds on ineligible payroll expenses. ATVM officials told us these instances were minor because the amounts were small relative to the total value of the loans and that the inappropriate use of funds has been corrected in these cases. Moreover, the officials stated that the borrowers have made corrections to their practices in light of these findings. We did

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not evaluate the extent to which borrowers have complied with requirements for use of ATVM funds or the sufficiency of the borrowers' corrections of the instances noted by the auditors.

The ATVM program's procedures also specify technical oversight duties, a primary purpose of which is to confirm that borrowers have made sufficient technical progress before the program disburses additional funds. ATVM staff are to periodically review information borrowers submit on projects' progress to determine whether they are adhering to the technical requirements of the loan agreements. The procedures also call for "heightened [technical] monitoring" when borrowers are (1) constructing or retrofitting manufacturing facilities or (2) performing engineering integration—that is, designing and building vehicle and component production lines. Further, the procedures call for engaging independent engineering expertise to provide independent validation of project progress when ATVM staff determine it is needed. ATVM officials have indicated independent engineering expertise is an important aspect of heightened technical monitoring.

To date, according to ATVM officials, the program's technical oversight for all the funded projects has largely consisted of ATVM staff reviewing borrower-submitted information on the projects' technical progress. Although the expertise of program staff is largely financial, rather than technical, ATVM officials told us that their technical reviews have been sufficient so far, including those reviews for the one borrower officials identified as having projects at a stage requiring heightened technical monitoring. In that regard, the program staff responsible for overseeing the ATVM loan to Ford has been reviewing Ford's quarterly reports on the progress of production and engineering integration activities, visiting facilities, and meeting regularly with company officials to discuss the projects' progress. According to the ATVM Director and staff, established manufacturers such as Ford will require little additional independent engineering expertise to supplement the oversight performed by ATVM staff because those manufacturers have experience with successfully bringing vehicles from concept to production. In contrast, the Director and staff explained that the start-up manufacturers are less experienced with the complexities of setting up new production processes and, therefore, their projects may be riskier. For this reason, ATVM officials told us, they plan to engage independent engineering expertise in the months ahead to monitor the activities of the start-up companies and Nissan once they reach a phase requiring heightened technical monitoring. According to ATVM staff, as of September 2010, they were in the process of evaluating one consultant's proposal to provide engineering expertise and were

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working with DOE's Loan Guarantee Programs to make those programs' manufacturing consultants available to assist the ATVM program.

According to documents we reviewed, however, all four borrowers—rather than the single borrower that the ATVM program staff asserts—have one or more projects that, according to the program's procedures, have already reached the stage requiring heightened technical monitoring. Specifically, Nissan has begun constructing its new battery manufacturing facility, and Fisker, Ford, and Tesla are performing engineering integration. Because ATVM staff, whose expertise is largely financial rather than technical, are so far providing technical oversight for the loans without the assistance of independent engineering expertise, the program may be at risk of not identifying critical deficiencies.

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## DOE Lacks Performance Measures That Would Enable It to Fully Assess the Extent to Which the ATVM Program Has Achieved Its Goals

DOE lacks sufficient performance measures that would enable it to fully assess whether the ATVM program has achieved its three goals. Principles of good governance indicate that agencies should establish quantifiable performance measures to demonstrate how they intend to achieve their program goals and measure the extent to which they have done so.<sup>27</sup> These performance measures should allow agencies to compare their programs' actual results with desired results and should be linked to program goals.

For the program goal of increasing the fuel economy of total passenger vehicles in use in the United States, the ATVM program has established two performance measures that assess the performance of ATVM-funded vehicles relative to the performance of similar vehicles in model year 2005, the base year. However, the measures do not enable DOE to assess the program's success in increasing the total fuel economy of U.S. passenger vehicles. The current ATVM program performance measures assess (1) the extent to which the average fuel economy of vehicles manufactured through projects funded by the ATVM program has increased over the average fuel economy of similar vehicles in model year 2005, expressed in percentage terms, and (2) the extent to which the petroleum used by vehicles manufactured through projects funded by the ATVM program has decreased from the amount used by similar vehicles in model year 2005, expressed in millions of gallons of fuel per year.

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<sup>27</sup>GAO, *Agencies' Annual Performance Plans under the Results Act: An Assessment Guide to Facilitate Congressional Decisionmaking*, GAO/GGD/AIMD-10.1.18 (Washington, D.C.: February 1998) and GAO, *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, GAO/GGD-10.1.20 (Washington, D.C.: April 1998).

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While these two performance measures will enable DOE to assess the fuel economy improvements of ATVM-funded vehicles specifically, the measures stop short of enabling DOE to fully determine the extent to which it has accomplished its overall goal of improving the fuel economy of all passenger vehicles in use in the United States. The measures stop short, in part, because neither isolates the improvements resulting from the program from those due to other factors. For example, the final rule effective July 6, 2010, implementing new CAFE standards requires that automakers selling vehicles in the United States produce more fuel-efficient passenger cars and light-duty trucks starting in model year 2012. In light of these new standards, in the future, ATVM borrowers might have acted to increase fuel economy and reduce the petroleum use of their vehicles in order to meet the more stringent CAFE standards—even without the ATVM funds. Without knowing the actions these companies might have taken in the absence of ATVM funding, the program will not be able to measure the extent to which the improvements in fuel economy and reductions in petroleum used by ATVM-funded vehicles resulted directly from the program. In prior work, we noted that it can be difficult to isolate the improvements resulting from a federal program when external factors also play a role, and this can hinder agency efforts to identify meaningful performance measures. In situations where a federal program is one factor among many contributing to an intended result of a program, measuring the effect of the other factors may help the agency measure the effect of the program. CAFE standards are one external factor affecting automakers' decisions about improving the fuel economy of their vehicles. Facing new CAFE standards beginning in model year 2012, automakers will need to improve the fuel economy of their vehicles to bring them in line with the new standards, and U.S. automakers in most cases have historically complied with increases in CAFE standards. For those ATVM-funded vehicles that will have achieved fuel economy that exceeds the CAFE targets in place at the time they are delivered, the extent to which their fuel economy exceeds the CAFE targets could indicate the maximum amount of improvement in fuel economy that could be attributed to the program.

Furthermore, the two performance measures stop short of enabling DOE to account for the effect of the ATVM program on the fuel economy of the passenger vehicles in use in the United States as a whole because they do not put the fuel economy improvements of vehicles funded by the program into the broader context of total U.S. passenger vehicle fuel economy. The two measures will enable DOE to take critical steps toward assessing its achievement of the overall goal by accounting for the fuel economy improvements and petroleum use reductions specific to ATVM-funded

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vehicles. However, assessing achievement of the overall goal would require DOE to put those specific achievements into the context of the fuel economy of all passenger vehicles in the United States and would require accounting for several factors, including the number and type of ATVM-funded vehicles consumers buy, the number and type of vehicles currently on the road that consumers replace with ATVM-funded vehicles, and the extent to which consumers use the ATVM-funded vehicles as compared with the vehicles they replaced. Our prior work has highlighted the importance of developing performance measures that provide a basis for comparing actual results with goals. Although problems with isolating program contributions make it difficult to develop performance measures that account for program effects with precision, a link between goals and measures is needed to provide important information for decision makers on the effectiveness of a program. In the case of the ATVM program, this would mean not only isolating the contribution of the program when it accounts for the fuel economy improvements and reductions in petroleum used for ATVM-funded vehicles, but also taking into account the numbers and types of ATVM vehicles that consumers have bought, the numbers and types of vehicles consumers have replaced, and the extent to which the new vehicles have been used by consumers relative to the old vehicles.

In addition, the ATVM program lacks performance measures that will allow DOE to assess the extent to which it has achieved the other two goals of the program—advancing automotive technology and protecting taxpayers' financial interests. ATVM program managers told us they believe that supporting the first generation of all-electric vehicles will further the program's second goal of advancing automotive technology by providing a springboard for industry to expand production of that technology in future years. However, the ATVM program does not have measures that will enable DOE to assess the extent to which the technologies it has supported have been adopted in the marketplace. Similarly, officials have said that to achieve the program's third goal of protecting taxpayers' financial interests, the program must award loans only to borrowers who are financially viable—that is, have reasonable prospects of repayment. However, the ATVM program has not identified related performance measures. When overseeing the loans, ATVM program procedures call for program staff to periodically review the borrowers' financial condition, examining such factors as borrowers' liquidity and debt service coverage ratios—used when the program established the borrowers' eligibility—as well as other indicators of borrowers' performance, such as timeliness of payments. However, the program has not set targeted levels of performance for all of these factors to be used to

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judge the financial condition of the borrowers and the extent to which taxpayers' financial interests have been protected.

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## Conclusions

DOE established the ATVM program so that it would, according to program estimates, result in fuel economy gains for the nation's vehicle fleet, advance the availability of innovative automotive technology to consumers, and protect the taxpayers' financial interests. In making its first loans, the ATVM program has injected significant funds into the U.S. automotive industry for promoting improved fuel efficiency of conventional vehicles and encouraging the development of vehicles with newer technologies that rely less, or not at all, on petroleum.

Technical oversight of the program is important to ensure that it delivers on its promises of advanced vehicles and components, thereby providing U.S. taxpayers what they paid for through the loans. However, the program's current approach of using ATVM staff to monitor the technical progress of the projects may not be sufficient to ensure that the vehicles are delivered as agreed because their expertise is largely financial and not technical—that is, ATVM staff lack the engineering expertise called for in the program's procedures, which cite the need for independent engineering expertise to validate project progress. Without qualified oversight to analyze the information submitted by the borrowers and to provide technical monitoring, the ATVM program cannot be adequately assured that the borrowers are delivering the vehicle and component projects as required by the loan agreements.

Further, assessing the extent to which the ATVM program has delivered on its promises requires the discipline of using quantifiable performance measures tied to program goals as a means of charting the program's direction and assessing its achievement. Although the ATVM program has performance measures tied to DOE's first goal of increasing the fuel economy of passenger vehicles in use in the United States, because these measures do not isolate the net effect of the program—that is, the improvements in fuel economy achieved by ATVM-funded vehicles that are the direct result of the program and that would not have occurred for other reasons, such as complying with new CAFE standards—gains in fuel economy and reductions in petroleum use that the program reports could be inaccurate. The extent to which the ATVM-funded vehicles achieve fuel economy that exceeds the CAFE targets in place at the time the vehicles are delivered, and associated reductions in petroleum use, may indicate the maximum amount of improvement in fuel economy that could be attributed to the ATVM program and could provide a useful metric for

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assessing program performance. Further, because the performance measures for the fuel economy goal stop short of quantifying the impact of the program on total U.S. passenger vehicles—by not taking into account the number and type of ATVM-funded vehicles consumers may purchase, the number and type of vehicles that may be replaced, and the relative usage of the new vehicles compared with that of the old ones—DOE will be unable to assess the extent to which the program has achieved this goal. Moreover, because DOE does not have quantifiable measures for assessing the extent to which the advanced technologies supported by the program have been adopted in the marketplace, DOE will not be able to assess its achievement of this second goal. Similarly, DOE's ability to assess its achievement of its third goal—protecting taxpayers' financial interests—is limited because DOE has not identified measures for quantifying indicators of borrowers' financial condition or other indicators of borrower performance.

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## Recommendations for Executive Action

To help ensure the effectiveness and accountability of the ATVM program, we recommend that the Secretary of Energy direct the ATVM Program Office to take the following two actions: (1) accelerate efforts to engage sufficient engineering expertise to verify that borrowers are delivering projects as agreed and (2) develop sufficient and quantifiable performance measures for its three goals.

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## Agency Comments and Our Evaluation

We provided a draft of this report to the Secretary of Energy or his designee for review and comment. In his comments, the Executive Director of DOE's Loan Programs Office responded that he was pleased that we reported on the progress DOE has made in awarding loans that promise to deliver gains in fuel economy, but that DOE did not agree with either of our two recommendations.

DOE disagreed with our recommendation that the agency accelerate its efforts to engage sufficient engineering expertise to verify that borrowers are delivering projects as agreed. According to the Executive Director, the program will use engineering expertise to help monitor projects under certain circumstances, such as during the construction of manufacturing facilities. However, he explained in his comments that the projects for the four loans DOE has made to date are in the very early stages of engineering integration—at drafting tables and on computers—and therefore such expertise has not yet been required to monitor them. We disagree. That the work may be in its early stages does not diminish the need for independent engineering expertise. In fact, the ATVM program's

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procedures state that engineering integration and construction activities require heightened technical monitoring, and, as DOE officials have previously told us, independent engineering expertise is an important aspect of such monitoring—particularly since ATVM staff expertise is largely financial, rather than technical. Moreover, three of the four loans have one or more projects that have been in the engineering integration phase for at least 10 months, and the other loan has at least one project that has begun construction—suggesting that DOE's assessment of the projects' status may not be up to date. By not engaging engineering expertise to aid ATVM staff in monitoring the projects, DOE has not taken appropriate steps to become adequately informed about the technical progress of the projects. Thus, DOE cannot be assured that the projects are on track to deliver the vehicles as agreed nor be in a position to require the borrowers to make any corrections in a timely and efficient manner. We maintain that DOE should accelerate its efforts to engage sufficient engineering expertise for monitoring technical aspects of the projects as soon as possible.

DOE also disagreed with our recommendation to develop sufficient and quantifiable performance measures for its three ATVM program goals. In his comments, the Executive Director stated that the performance measures suggested by GAO would greatly expand the scope of the ATVM program and do not appear to be consistent with the intent of Congress in authorizing the program. However, he did not explain how measuring the performance of the program would expand its scope or be inconsistent with Congress' intent beyond pointing out that measuring performance as we recommended would require research efforts by program staff and that Congress did not specify the performance measures. Principles of good government, as specified in the Government Performance and Results Act, require agencies to establish goals for their programs and performance measures that provide a basis for comparing program goals with the results. DOE rightly established performance goals for the program, which are to (1) increase the fuel economy of U.S. passenger vehicles as a whole, (2) advance automotive technology in the United States, and (3) protect taxpayers' financial interests. Furthermore, as we reported, DOE established two performance measures for its first goal—the extent to which the average fuel economy of ATVM-funded vehicles has increased over that of similar vehicles from model year 2005 and the extent to which the vehicles have consumed petroleum in comparison to similar vehicles from model year 2005. These performance measures fall short, in part, because they address only improvements at the program level and do not put those improvements into the broader context of total U.S. passenger vehicle fuel economy, which is necessary for assessing progress toward



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the national-level goal. For example, DOE's measure for assessing the petroleum saved by vehicles in the program provides a first step in determining whether the program is making progress toward its national-level goal of increasing fuel economy of U.S. passenger vehicles as a whole. However, to put DOE's estimates of petroleum to be saved by program vehicles into the context of U.S. vehicles as a whole, DOE would need to determine such additional factors as (1) the extent to which program vehicles become part of the U.S. fleet as a whole, (2) the number of vehicles that the program vehicles replace, and (3) the number of miles the new vehicles are driven as compared with the miles driven by the vehicles they replace. Furthermore, DOE's two performance measures do not isolate the effects of the program from other factors. Although this can be difficult to do with precision, accounting for the effects of other factors could help the agency more accurately determine the effects of the program. We note in our report that, because automakers selling cars in the United States have to meet increasingly stringent CAFE targets, DOE could approximate the effects of the program by measuring the extent to which the ATVM-funded vehicles achieve fuel economy that surpasses those CAFE targets. However, in his comments, the Executive Director stated that DOE will not create new performance measures for any of its three program goals. By not setting sufficient performance measures for its three program goals, DOE is unable to assess its progress in accomplishing them. Assessing the extent to which the ATVM program is accomplishing its goals is particularly important given the current economic climate and constrained federal budget. DOE's failure to develop and use appropriate performance measures means that Congress lacks important information on whether the funds spent so far are furthering the program's goals and, consequently, whether the program warrants continued support. It also means that U.S. taxpayers do not know whether they are getting what they paid for through the loans.

DOE's letter commenting on our report is presented in appendix II. DOE also provided more details and technical comments, which we incorporated as appropriate.

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As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to appropriate congressional committees, the Secretary of Energy, and other interested parties. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staffs have any questions about this report, please contact me at (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

A handwritten signature in cursive script, reading "Frank Rusco", followed by a long horizontal flourish line.

Frank Rusco  
Director, Natural Resources and Environment

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# Appendix I: Objectives, Scope, and Methodology

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To identify the steps the Department of Energy (DOE) has taken to implement the Advanced Technology Vehicles Manufacturing (ATVM) Loan Program, we analyzed relevant provisions of the Energy Independence and Security Act of 2007 (EISA) and the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009; the ATVM program's 2008 interim final rule; the ATVM program's credit policies and procedures manual; and other documentation provided by DOE. We discussed the interim final rule and program implementation with officials from the ATVM program; the Office of Energy Efficiency and Renewable Energy; the Office of the Secretary of Energy; the Office of the Chief Financial Officer; and the Credit Review Board, which is charged with overseeing the ATVM program and making recommendations to the Secretary of Energy on whether or not to award loans. We also compared the interim final rule with applicable requirements contained in EISA and the Office of Management and Budget Circular A-129, Policies for Federal Credit Programs and Non-Tax Receivables.

To examine the ATVM program's progress in awarding loans, we analyzed documents DOE decision makers used to select borrowers; minutes of Credit Review Board meetings; the loan agreements made as of February 24, 2011, and other relevant documents. We also interviewed cognizant DOE and ATVM officials to gain further information on the loans. We did not evaluate the technical or financial soundness of the projects that DOE considered for loans.

In addition, we compared the program's fuel economy estimates for the funded vehicles with (1) the average fuel economy of the comparable vehicle class for model year 2005 and (2) data on future CAFE targets. For each vehicle project that has received funding from the ATVM program, we compared the miles per gallon (mpg) or miles per gallon of gasoline equivalent (mpgge) result from DOE's Powertrain System Analysis Toolkit (PSAT) model for the representative vehicle used to establish the project's eligibility to the average mpg for the comparable vehicle class for model year 2005 as defined under ATVM's interim final rule. We also compared the mpg or mpgge result from DOE's PSAT model, which is a single mpg rating for a particular model year, with the mpg target under corporate average fuel economy (CAFE) standards for a vehicle with the same footprint in the same model year. We did not compare the estimated mpg or mpgge to CAFE targets in years subsequent to the first year of expected production for that model. We determined that these data were sufficiently reliable for our purposes.

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**Appendix I: Objectives, Scope, and Methodology**

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To assess how the ATVM program is overseeing the loans, we analyzed the ATVM program's credit policies and procedures manual, the program's credit monitoring plans for borrowers, borrowers' progress reports, and the external auditors' reports available for the three borrowers who have had external audit reports as of September 16, 2010. In addition, we discussed loan oversight and monitoring with officials from the ATVM program and the Office of Energy Efficiency and Renewable Energy. Finally, we consulted GAO's *Standards for Internal Control in the Federal Government*.

To evaluate the extent to which DOE can assess its progress toward meeting program goals, we analyzed relevant provisions of EISA, DOE's budget request documents, and other documentation provided by the ATVM program. We also analyzed relevant provisions of the Government Performance and Results Act (GPRA), as well as our prior work on GPRA and federal standards for internal control. Finally, we discussed strategic planning and program implementation and evaluation with relevant ATVM officials.

We conducted this performance audit from September 2009 through February 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Appendix II: Comments from the Department of Energy



Department of Energy  
Washington, DC 20585



Mr. Frank Rusco  
Director, Natural Resources and Environment  
Government Accountability Office  
Washington, DC 20548

Dear Mr. Rusco:

Thank you for the opportunity to comment on the Government Accountability Office's (GAO) draft report on the Department of Energy's (DOE or Department) Advanced Technology Vehicles Manufacturing Incentive Loan Program (ATVM). *Advanced Technology Vehicle Loan Program Implementation Is Underway but Enhanced Technical Oversight and Performance Measures Are Needed.*

The Department is pleased that the GAO recognizes the progress of the ATVM program in making \$8.4 billion in loans that will yield fuel economy improvements in the near and long-term while creating or saving an estimated 37,800 jobs. ATVM loans are fostering the development of a variety of advanced automotive projects including those that offer improved internal combustion technology as well as those utilizing electric and hybrid technologies.

DOE is very proud of the fact that the program was set up in record time. Authorized under Section 136 of the Energy Independence and Security Act of 2007 (P.L. 110-140) (EISA), the program was not funded until the Fiscal Year 2009 Continuing Resolution was approved by Congress in October 2008. On November 5, 2008, DOE issued the Interim Final Rule in approximately half of the 60-day expedited timeframe mandated by Congress. The ATVM program has been enthusiastically received by the automobile industry. Over 130 applications for nearly 290 projects have been submitted to the ATVM program. These applications have come from both automobile manufacturers and component makers. It is also important to note that the funding provided by ATVM came at a critical time in the development of plug-in hybrid and electric vehicles providing long-term capital for these efforts when private financing was not available.

As noted in your report, the Department has taken numerous steps to successfully implement the ATVM program. The Department set three goals: increase the fuel economy of U.S. passenger vehicles as a whole, advance U.S. automotive technology, and protect taxpayers' financial interests. DOE also set technical, financial, and environmental eligibility requirements. Additionally, DOE established criteria for judging the technical and financial merits of applicants.

A paramount concern is protecting the American taxpayer. To that end, the ATVM program undertakes a rigorous screening for technical merit, financial viability, including a thorough credit underwriting of the project, and then negotiates a commitment term sheet. The project then



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**Appendix II: Comments from the Department  
of Energy**

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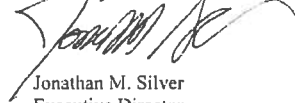
enters the approval process which, if successful, leads to negotiation of a loan agreement. After closing loans, the Department monitors the financial conditions of borrowers through comparisons of actual performance to the established financial covenants and other key terms and conditions associated with the loan to ensure taxpayers are protected.

GAO's report makes two recommendations. With respect to the first, DOE agrees that engineers should be engaged to monitor certain aspects of ATVM loans as part of a comprehensive monitoring program, and in fact, the Loan Programs Office has already engaged independent engineers to review certain aspects of ATVM applications. DOE takes exception with GAO's assertion that all four outstanding ATVM loans made to date should have had independent engineers reviewing initial stages of engineering integration work. This is done primarily at drafting tables or on computers and as such would be difficult to appraise. Engaging engineers at this stage would likely not yield the insights which would increase effectiveness of the ATVM program. DOE engineers will provide more extensive oversight of start-up companies including monthly on-site inspections. However, DOE believes that established original equipment manufacturers which have large staffs of highly experienced engineers and other experts require less frequent inspection unless there is a problem achieving performance specifications of new vehicles or in case there are manufacturing cost issues. DOE will utilize engineering expertise on a regular basis during the construction of all vehicle assembly and component manufacturing facilities supported by ATVM loans.

With respect to the second recommendation regarding performance measures, DOE believes that the ATVM program has faithfully adhered to the requirements of the EISA as more fully developed in its implementing regulations. Performance measures suggested by the GAO greatly expand the scope of the program and do not appear consistent with the intent of Congress in authorizing this program. We do not intend for the program to create new performance measures that Congress did not specify. Furthermore, isolating the contribution of the ATVM program by taking into account the numbers and types of ATVM vehicles that consumers might have bought, the numbers and types of vehicles consumers have replaced, and the extent to which the new vehicles have been used by consumers relative to the old vehicles as GAO suggests would require a significant research effort which would divert resources and produce no benefit.

Enclosed are the Department's detailed response to GAO's specific recommendations and separate technical and factual comments on specific language in the draft report. We look forward to working with your team on future engagements.

Sincerely,



Jonathan M. Silver  
Executive Director  
Loan Programs Office

Enclosures

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## Appendix III: GAO Contact and Staff Acknowledgments

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### GAO Contact

Frank Rusco, (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov)

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### Staff Acknowledgments

In addition to the individual named above, Karla Springer, Assistant Director; Marcia Carlsen; Elizabeth Curda; Nancy Crothers; Brandon Haller; Joah Iannotta; Terence Lam; Rebecca Makar; Reina Nunez; Madhav Panwar; Mick Ray; Ray Sendejas; Kiki Theodoropoulos; and Barbara Timmerman made key contributions to this report.

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# **EXHIBIT 12**

EXECUTION COPY

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CONDITIONAL COMMITMENT LETTER

by and between

UNITED STATES DEPARTMENT OF ENERGY

and

FISKER AUTOMOTIVE, INC.

Dated as of September 18, 2009

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Appendices to the Conditional Commitment Letter

Appendix A Term Sheet

Exhibits and Schedules to the Term Sheet

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| Exhibit D  | Form of Collateral Value Certificate |
| Exhibit E  | Form of Advance Request              |

## CONDITIONAL COMMITMENT LETTER

September 18, 2009

Fisker Automotive, Inc.  
19 Corporate Park  
Irvine, CA 92606

**Re:** Loan Application of Fisker Automotive, Inc. (the "*Application*")  
ATVM Loan Number: A1005

Ladies and Gentlemen:

Fisker Automotive, Inc. ("*you*" or the "*Applicant*") has submitted an application (the "*Application*") for a term loan authorized and approved by the United States Department of Energy ("*DOE*") and made by and through the Federal Financing Bank, an instrumentality of the United States government created by the Federal Financing Bank Act of 1973 that is under the general supervision of the Secretary of the Treasury (the "*FFB*"), pursuant to DOE's Advanced Technology Vehicles Manufacturing Incentive Program (the "*ATVM Program*") authorized by section 136 of the Energy Independence and Security Act of 2007, as amended from time to time ("*Section 136*").

This conditional commitment letter (together with all attachments hereto, including the Terms and Conditions for the Loans under the ATVM Program (the "*Term Sheet*") attached as Appendix A hereto, the "*Conditional Commitment Letter*") will confirm the understanding and agreement between DOE and the Applicant in connection with the proposed financing for the Karma Engineering Works and the Kx Facility (as such terms are defined in the Term Sheet). Capitalized terms used but not defined herein have the meanings given to such terms in (i) the Term Sheet or (ii) 10 CFR Part 611 and any other new or amended regulations promulgated by DOE to implement Section 136 (the "*Applicable Regulations*," and together with Section 136, the "*Program Requirements*"). All provisions of this Conditional Commitment Letter are subject to the Program Requirements.

1. *Facilities, etc.*

You have advised us that you wish to obtain the direct loan(s) described in the Term Sheet to finance (i) the cost of certain Karma Engineering Works in an aggregate amount of up to \$169,300,000 (the "*Karma Loan*") and (ii) the cost of establishing the Kx Facility in an aggregate amount of up to \$359,360,000 (the "*Kx Loan*", and together with the Karma Loan, the "*Loans*").

2. *Conditional Commitment*

In connection with the foregoing, we are pleased to advise you that DOE is willing to (i) arrange the Loans, (ii) designate the Applicant as a borrower under the Program Financing Agreement and (iii) cause FFB to enter into a Note Purchase Agreement with the Applicant for the purchase of one or more notes issued by the Applicant as more particularly set out in the Term Sheet. DOE's commitment hereunder is subject to (a) the preparation, execution and

- 2 -

delivery of definitive Transaction Documents (as defined in the Term Sheet) incorporating the terms and conditions set forth in this Conditional Commitment Letter, satisfactory to DOE; (b) the absence of a Material Adverse Effect (as defined in the Term Sheet); (c) DOE's satisfaction with all legal, tax and accounting matters with respect to the Applicant; (d) DOE's satisfaction with the capital, corporate and organizational structure of the Applicant; (e) your receipt to DOE's satisfaction of all governmental and third party consents necessary to permit the Loans and the borrowings thereunder; and (f) those conditions precedent specified in the Term Sheet.

As an inducement to DOE to enter into this Conditional Commitment Letter, the Applicant represents and warrants to and agrees with DOE that:

(i) the Applicant will use the proceeds of the Karma Loan to perform engineering integration work in the United States related to the development, commercial production, sale and marketing of Fisker's Karma high performance plug-in hybrid electric vehicle (such development, commercial production, sale and marketing, together with the related engineering integration work, the "*Karma Project*");

(ii) the Applicant will use the proceeds of the Kx Loan to establish and complete the construction and development of a manufacturing facility in the United States to be used in the development, commercial production, sale and marketing of Fisker's Kx plug-in hybrid electric vehicle (such development, commercial production, sale and marketing, together with the establishment and construction of such manufacturing facility, the "*Kx Project*" and, together with the Karma Project, the "*Projects*"), all as contemplated by the Application;

(iii) the Applicant and its affiliates are not seeking (and will not seek prior to the earlier of the occurrence of the Financial Closing Date (as defined in the Term Sheet) or the expiration of the conditional commitments of DOE contemplated hereby pursuant to Section 13 of this Conditional Commitment Letter) alternative financing arrangements for the uses contemplated for the Loans, it being understood that the Applicant may seek supplemental funding from states or other non-federal governmental entities in the United States in connection with any part of the Projects ("*Supplemental Funding*"), *provided* that such Supplemental Funding is permitted by the Program Requirements; and

(iv) the transactions contemplated hereby have been duly authorized by all corporate action required on the part of the Applicant (including all approvals of holders of any equity interests in the Applicant that may be necessary or desirable for the execution, delivery and performance of this Conditional Commitment Letter and the undertaking of the obligations set forth in Section 7 of this Conditional Commitment Letter with respect to the definitive Transaction Documents, including incurring the indebtedness under the Loans and undertaking the Projects, by the Applicant).

### 3. *True and Complete Disclosure*

The Applicant hereby certifies as follows:

(i) The information, reports, financial statements, exhibits and schedules furnished by or on behalf of the Applicant or any subsidiary of the Applicant to DOE,

FFB or their respective designees, agents or representatives in connection with the negotiation, preparation or delivery of this Conditional Commitment Letter, including the Application, the Term Sheet, and the Information Certificate delivered by the Applicant on the date hereof (the "*Information Certificate*") or included herein or therein or delivered pursuant hereto or thereto, when taken as a whole, do not contain any untrue statement of material fact or omit to state any material fact necessary to make the statements herein and therein, in light of the circumstances under which they were made, not misleading (it being understood that in the case of projections, such projections are based on estimates which Applicant believes to be reasonable as of the date such projections are stated or certified).

(ii) All information furnished after the date hereof by or on behalf of the Applicant or any other subsidiary of the Applicant to DOE, FFB or their respective designees, agents or representatives in connection with this Conditional Commitment Letter, including the Term Sheet, or the Transaction Documents and the transactions contemplated hereby and thereby will be, when taken as a whole, true, complete and accurate in every material respect and not contain any untrue statement of material fact or omit to state any material fact necessary to make the statements herein and therein, in light of the circumstances under which they were made, not misleading (it being understood that in the case of projections, such projections are based on estimates which Applicant believes to be reasonable as of the date such projections are stated or certified).

(iii) There is no fact known to the Applicant (other than facts generally known to the public that relate to changes in the automotive industry or to conditions in the U.S. or global economy or capital or financial markets generally or to changes in general legal, tax, regulatory, political or business conditions) that, after due inquiry, could reasonably be expected to have a Material Adverse Effect that has not been disclosed herein or in a report, financial statement, exhibit, schedule, disclosure letter or other writing furnished to DOE or FFB for use in connection with the transactions contemplated hereby.

#### 4. *Indemnity*

The Applicant hereby indemnifies and holds harmless the United States, including DOE and FFB, and each other governmental agency or instrumentality of the United States, their respective designees, agents, and contractors, and all of their respective directors, officers and employees (each, an "*Indemnified Person*") from and against (and will reimburse each Indemnified Person for) any and all losses, claims, damages, liabilities or other expenses (including the reasonable fees, disbursements and other charges of counsel, but not including the expenses incurred by DOE in connection with the preparation, negotiation, execution and delivery of this Conditional Commitment Letter, Term Sheet and any Transaction Documents), as the same are incurred, to which such Indemnified Person may become subject arising out of or relating to (i) the execution or delivery of this Conditional Commitment Letter, Term Sheet, any Transaction Document or any agreement or instrument contemplated hereby or thereby, or the performance by the parties hereto or thereto of their respective obligations hereunder or thereunder or the consummation of the transactions contemplated hereby or thereby, (ii) the enforcement or preservation of any rights under this Conditional Commitment Letter, Term Sheet, any Transaction Document or any agreement or instrument prepared in connection

herewith or therewith, (iii) the Loans or the use or proposed use of the proceeds thereof, (iv) any actual or alleged presence or release of any substance of any kind defined as hazardous or toxic under the environmental laws of the United States, any foreign government or international organization, or of any state, local, municipal or other governmental authority, on or from any property owned, occupied or operated by the Applicant or any of its affiliates, or any environmental liability related in any way to the Applicant or any of its affiliates or any of its properties, or (v) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory, whether brought by any third party or by the Applicant or any of its affiliates or otherwise, and regardless of whether any Indemnified Person is a party thereto, *provided* that such indemnity shall not apply to the extent the loss, claim, damage, liability or other expense results from the gross negligence or willful misconduct of the Indemnified Person, in each case as determined by a court of competent jurisdiction in a final, non-appealable order. This indemnity obligation shall survive the execution of the Loan Documents and the expiration or other termination of the Loans.

#### 5. *Cooperation*

The Applicant will cooperate fully with DOE and its representatives and advisors with respect to its due diligence investigation of the Projects, including providing prompt and complete access to employees, engineers, accountants, facilities, books and records and contracts of the Applicant, as well as such other information as may be requested by DOE or its representatives or advisors, subject to reasonable measures implemented to ensure confidentiality of the information provided (consistent with the requirements of the Freedom of Information Act, 5 U.S.C. § 552 (“FOIA”) and any regulations promulgated thereunder, and other applicable law).

#### 6. *Reporting Requirements*

The Applicant will provide the following documents and information to DOE beginning on the date on which a conditional commitment exists up to and including the Financial Closing Date (at which point the Applicant will comply with the various reporting requirements set forth in the Loan Documents) or, if this Conditional Commitment Letter is terminated as provided herein, through this Conditional Commitment Letter’s termination date:

- (a) within five business days of the Applicant obtaining knowledge of such change, notice of any previously unreported change to the information contained in the Applicant’s Application for the Loans which could reasonably be expected to have a material adverse effect on either Project or Fisker or on the value of any collateral valued in the Collateral Value Certificate, including any material change in (i) the description of the Projects and related plans and contractors; (ii) the status of each Project’s related applications or approvals for governmental permits and authorizations; and (iii) the potential environmental impact of each Project; and
- (b) at all times, any other information requested by DOE in its reasonable judgment regarding the Applicant or the Projects.



7. *Definitive Loan Documents*

As soon as practicable following the execution and delivery of this Conditional Commitment Letter, DOE and the Applicant will negotiate in good faith to enter into definitive Transaction Documents with respect to the transactions described in the Term Sheet to be on such terms and conditions as DOE and the Applicant mutually agree. The definitive Transaction Documents will include (i) the terms contained herein, including those terms set forth in the Applicable Regulations and Term Sheet, and (ii) such other terms and conditions as DOE and the Applicant mutually agree. Each of DOE and the Applicant will use its reasonable best efforts to prepare such Transaction Documents, and agree to take all such actions as may be required to consummate the transactions described in the Term Sheet on the terms and conditions set forth therein. However, the failure of DOE to execute and deliver the definitive Transaction Documents will not affect the binding effect or enforceability of Sections 3, 4, 8, 11 and 12 of this Conditional Commitment Letter.

8. *Assignment; Entire Agreement*

This Conditional Commitment Letter shall not be assignable by the Applicant without the prior written consent of DOE (and any such purported assignment shall be void) and may not be amended or waived except by a written instrument signed by DOE and Applicant. By executing this Conditional Commitment Letter, DOE and Applicant acknowledge that this Conditional Commitment Letter, including the Term Sheet, is the only agreement between the Applicant and DOE with respect to the Loans and sets forth the entire understanding of the parties with respect thereto. This Conditional Commitment Letter is intended to be solely for the benefit of the parties hereto and is not intended to confer any benefits upon, or create any rights in favor of, any person other than the parties hereto.

9. *Binding Nature; Survival*

The provisions of this Conditional Commitment Letter are binding on the parties hereto, and Sections 3, 4, 8, 11 and 12 of this Conditional Commitment Letter shall survive any termination or expiration of this Conditional Commitment Letter, provided that you will be released from your indemnification obligations hereunder upon the execution of the Loan Documents and the occurrence of the Financial Closing Date thereunder.

10. *Counterparts*

This Conditional Commitment Letter may be executed in separate counterparts, each of which shall be an original and all of which taken together shall constitute one and the same agreement. Such executed counterparts may be delivered electronically, with the original to be delivered promptly thereafter.

11. *Public Statements*

Neither the Applicant nor any subsidiary of the Applicant, nor any director, officer, employee or other agent affiliated with the Applicant or any person affiliated with any of the foregoing, shall make any press announcements or public statement about the Projects or the Loans without the prior written approval of the Director of the ATVM program at DOE.

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12. *Governing Law*

This Conditional Commitment Letter shall be governed by the federal laws of the United States of America and not the law of the several states.

13. *Acceptance of Term Sheet; Expiration of Commitment*


If you are in agreement with the foregoing, please indicate your acceptance of the terms and conditions of this Conditional Commitment Letter, including the Term Sheet, by signing in the appropriate space below and returning to DOE (whether by way of manual or electronic delivery) an executed counterpart of this Conditional Commitment Letter not later than 5:00 p.m., Washington D.C. time, on September 18, 2009. DOE's commitment hereunder will expire at such time in the event DOE has not received such executed counterpart in accordance with the preceding sentence. Hereafter, this Conditional Commitment Letter and DOE's commitments hereunder shall terminate on the earlier of (i) February 15, 2010 (unless the Secretary or his appointed designee agrees to an extension, with such modifications of the terms hereof as he may require in his discretion), and (ii) the date on which the Loan Documents have been executed and delivered.

**[Signatures Appear on Next Two Pages]**

- 7 -

Very truly yours,

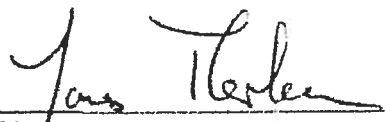
U.S. DEPARTMENT OF ENERGY

By:   
Lachlan Seward,  
as Director of the Advanced Technology  
Vehicles Manufacturing Incentive Program

- 8 -

ACCEPTED AND AGREED TO  
as of the date of this Conditional Commitment Letter:

**FISKER AUTOMOTIVE INC.**

By:   
Name: JANCE THORBURN  
Title: CFO

**APPENDIX A**  
to the Conditional Commitment Letter

**TERMS AND CONDITIONS FOR THE LOANS UNDER THE ATVM PROGRAM**

This Term Sheet outlines the material terms and conditions of the transactions contemplated herein, but is not intended to be a comprehensive list of all relevant terms and conditions. The Transaction Documents will contain the terms and conditions set forth in this Term Sheet, in addition to other standard provisions and such other terms and conditions as DOE, in its discretion, may require. DOE reserves the right to propose such further terms and conditions as it deems necessary in the course of further due diligence and receipt of related approvals satisfactory to DOE, in its discretion, and any other approval procedures customary for a transaction of this nature.

**Facility**

1. *Facility*

Two multi-draw term loan facilities consisting of the Loans in an aggregate amount of up to \$528,660,000 that are full recourse to the Borrower (as defined below), consisting of (i) the Karma Loan facility, in an aggregate amount of up to \$169,300,000, and (ii) the Kx Loan facility, in an aggregate amount of up to \$359,360,000.

The Loans will be secured by a first priority lien or security interest on all of the assets acquired with proceeds of the Loans and substantially all of the other assets of the Borrower as described in Section 15 of this Term Sheet.

2. *Borrower*

The borrower for the Loans will be Fisker Automotive, Inc., a corporation organized under the laws of Delaware (“*Fisker*” or the “*Borrower*”). Prior to the Financial Closing Date (as defined in Section 20 below), the current shareholders of Fisker will establish a new legal entity (“*Holding*”) for the sole purpose of owning 100% of Fisker.

**Projects and Eligible Project Costs**

3. *Projects*

The projects to be financed with the Loans consist of (i) the engineering integration work performed in the United States (and related tooling and engineering integration) with respect to the Karma Project (the “*Karma Engineering Works*”) and (ii) the establishment of a manufacturing facility in the United States with respect to the Kx Project (the “*Kx Facility*”), each as described in more detail in the Application and in the Milestones to be developed pursuant to Section 4 below.

4. *Business Plan*

(a) The Borrower will, no later than 15 business days prior to the Financial Closing Date (as defined in Section 22 of this Term Sheet), and at specified intervals during the terms of the Loans, provide to DOE an updated business plan for the Projects containing, in each case, as may be acceptable to DOE in its discretion (unless set forth otherwise below):

- 2 -

(i) a reasonably detailed list of milestones (the "*Milestones*"), in chronological order, that the Borrower will need to satisfy in order to fully complete each Project, together with the anticipated completion date for each of the Milestones (each, a "*Milestone Completion Date*") and, to the extent they can be identified as of such date, the anticipated costs and expenses that the Borrower expects will be incurred and paid for each Project in connection with, and through the completion of, each of the Milestones,

(ii) financial statements as of June 30, 2009, for the Borrower, together with a financial model presenting projected financial statements, quarterly for 2009, 2010 and 2011 and annually thereafter, for the Borrower for the proposed term of the obligations, including, *inter alia*, income statements, balance sheets and cash flow statements,

(iii) a detailed description of the overall financing plan for each Project and all other projected cash needs of the Borrower for the same period, including all projected sources and uses of funding, a detailed schedule of proposed Loan advances for each fiscal quarter and the applicable Eligible Project Costs (as such term is defined in Section 5(a)(ii) of this Term Sheet) to be reimbursed with such proceeds,

(iv) separate operating and capital expenditure budget forecasts for each Project<sup>1</sup>, including (A) a detailed line item breakdown of the total costs of each Project (including, but not limited to, the costs of the Karma Engineering Works and the Kx Facility, as applicable), in each case at a level of detail satisfactory to DOE, and (B) a detailed description of the methodology and all material assumptions used to produce such estimates and the projected financial statements referred to in clause (ii) above (the "*Karma Budget*" or the "*Kx Budget*", as applicable, and together, the "*Budget*"), and

(v) such other information as may be required by DOE in its reasonable discretion.

The items described in clauses (i) through (v) above, inclusive, as approved from time to time by DOE, are referred to herein as the "*Business Plan*".

(b) The Borrower has submitted a proposed set of Milestones to DOE as of the date hereof which DOE is currently reviewing. While the Business Plan may be periodically updated in accordance with the terms of this Term Sheet, once approved by DOE (i) the Milestones and the Milestone Completion Dates may only be updated or otherwise amended with the written consent of the DOE and (ii) no Budget line item may be increased in a material amount (to be defined more precisely in the Loan Documents) unless DOE has approved an equivalent decrease in another Budget line item or the Borrower has obtained additional equity investment commitments equal to the amount of such increase for the purpose of funding the cost thereof on terms and conditions satisfactory to DOE. The Milestones to be included in the Business Plan will in any event include:

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<sup>1</sup> The capital expenditure budget should reflect an estimated \$42 million site acquisition cost (which has been used in Kx Facility Loan sizing) and a separate \$33 million contingency available solely for site acquisition expenses.

- 3 -

(i) with respect to the Karma Project, (A) completion of the Karma Engineering Works, (B) completion of all other engineering integration work required for the Karma Project, (C) a schedule for completion of all vehicle certification requirements in the United States and the European Union related to vehicle safety and environmental matters; (D) commencement of commercial production of the Karma vehicle and satisfaction of mutually agreed performance and quality assurance tests, (E) achieving Karma vehicle sales of 11,000 units by September 30, 2011 at an average price of not less than \$87,900, and (F) creation of a satisfactory dealer network for sales of Karma vehicles,

(ii) with respect to the Kx Project, (A) purchase of the site required for the Kx Facility (to be completed no later than April 30, 2010) (B) completion of construction and/or re-equipping of the manufacturing facility for the Fisker Kx vehicle and all related tooling work required for assembly thereof, (C) completion of all engineering integration work required for tooling related to Kx vehicle assembly; (D) a schedule for completion of all vehicle certification requirements related to safety and environmental matters for retail sales of the Kx vehicle in the United States and European Union; (E) commencement of commercial production of the Kx vehicle at the Kx Facility in quantities to be mutually agreed and satisfaction of mutually agreed performance and quality assurance tests and (F) creation of a satisfactory dealer network for sales of Kx vehicles and

(iii) funding of all necessary equity capital required to achieve each Milestone by the related Milestone Completion Date (such equity capital shall include at least \$235 million of additional equity (the "*Minimum Additional Equity*") to be raised by the Milestone Completion Dates set forth on Schedule 2 hereto).

5. *Use of Proceeds; Eligible Project Costs*

(a) Eligible Project Costs

(i) The proceeds of the Karma Loan may be used from time to time solely for the purpose of reimbursing the Borrower for costs or expenses of the Karma Engineering Works specified in the relevant advance request that (A) qualify as eligible costs within the meaning of Section 611.102 of the Applicable Regulations and that have not been funded with proceeds (other than proceeds of the Karma Loan) obtained by the Borrower from the United States or any instrumentality thereof (other than the Karma Loan), including under the Troubled Asset Relief Program or any grant program, (B) are provided for in the Karma Budget, (C) do not constitute Cost Overruns (as defined in Section 8 of this Term Sheet), and (D) were not paid on or prior to December 31, 2008 ("*Eligible Karma Engineering Costs*").

(ii) The proceeds of the Kx Loan may be used from time to time solely for the purpose of reimbursing the Borrower for costs or expenses of the Kx Facility specified in the relevant advance request that (A) qualify as eligible costs within the meaning of Section 611.102 of the Applicable Regulations and that have not been funded with proceeds (other than proceeds of the Kx Loan) obtained by the Borrower from the United

- 4 -

States or any instrumentality thereof (other than the Kx Loan), including under the Troubled Asset Relief Program or any grant program, (B) are provided for in the Kx Budget, (C) do not constitute Cost Overruns (as defined in Section 8 of this Term Sheet), and (D) were not paid on or prior to December 31, 2008 (“*Eligible Kx Facility Costs*”, and together with Eligible Karma Engineering Costs, the “*Eligible Project Costs*”).

(b) Projected Eligible Project Costs.

As of the date of this Term Sheet, Fisker estimates that:

(i) the aggregate expenses for the Karma Engineering Works that qualify as Eligible Karma Engineering Costs (including Historical Costs (as defined in Section 9(b) of this Term Sheet) that would otherwise qualify as Eligible Karma Engineering Costs if they had been incurred after December 31, 2008) will not exceed \$213,700,000; and

(ii) the aggregate expenses for the Kx Facility that qualify as Eligible Kx Facility Costs (including Historical Costs (as defined in Section 9(b) of this Term Sheet) that would otherwise qualify as Eligible Kx Facility Costs if they had been incurred after December 31, 2008) will not exceed \$449,200,000.<sup>2</sup>

6. *Applicant Commitment*

Fisker will commit to pay all costs and expenses necessary for timely completion of:

(i) the Karma Project (including the Karma Engineering Works and each Milestone related to the Karma Project) to the extent such costs and expenses exceed the amounts available from time to time under the terms of the Loan Documents (as defined in Section 19) (such payments, the “*Applicant Karma Project Payments*”). Without limiting the generality of the foregoing, immediately prior to FFB making any Advance (as defined in Section 10(a) of this Term Sheet) related to the Karma Loan, Fisker will make Applicant Karma Project Payments or provide evidence of Applicant Karma Project Payments in a manner satisfactory to DOE of all expenses of the Karma Engineering Works and incurred on or before the date of such Advance to the extent such expenses exceed the Maximum Karma Loan Amount (as defined in Section 9(a)(i) of this Term Sheet) as of the date of such Advance; and

(ii) the Kx Project (including each Milestone related to the Kx Project) to the extent such costs and expenses exceed the amounts available from time to time under the terms of the Loan Documents (such payments, the “*Applicant Kx Project Payments*”). Without limiting the generality of the foregoing, immediately prior to FFB making any Advance related to the Kx Loan, Fisker will make Applicant Kx Project Payments or provide evidence of Applicant Kx Project Payments in a manner satisfactory to DOE of all expenses of the Kx Facility incurred on or before the date of such Advance to the extent such expenses exceed the Maximum Kx Loan Amount (as defined in Section 9(a)(ii) of this Term Sheet) as of the date of such Advance.

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<sup>2</sup> This assumes a Kx site acquisition cost of \$42 million.



7. *Committed Equity Condition*

The obligation to make any Advance will be subject to the condition (the “*Committed Equity Condition*”) that the amount to be Advanced, together with (i) any remaining undisbursed amount under the Loans, and (ii) Fisker’s financial resources in the form of (w) cash and cash equivalents on hand, (x) additional equity funding committed on terms satisfactory to DOE, (y) reasonable projections of future retained earnings satisfactory to DOE, and (z) available undrawn commitments under the permitted working capital facility referred to in Section 28(c) (but specifically excluding any cash or commitments that Fisker is restricted from using to fund costs and expenses of the Projects, whether by contract, legal requirement or otherwise), will be sufficient to:

- (i) achieve each Milestone on or before the relevant Milestone Completion Date,
- (ii) provide all working capital contemplated in the Business Plan or otherwise required for the Projects, including for commercial production of the Karma and Kx vehicles at levels not less than those contemplated in the Business Plan, and
- (iii) fund any contingencies or cost overruns that might arise in connection with the Projects.

8. *Cost Overruns*

In the event that the Borrower incurs costs and expenses in excess of any amount specified in a specific line item of the Business Plan in respect of the Karma Engineering Works or the Kx Facility (a “*Cost Overrun*”), the Borrower shall be required to pay such Cost Overrun out of its own funds or with additional equity and not with the proceeds of any Loans.

Loans9. *The Loans; Historical Costs*

(a) The Loans are to be made in one or more Advances by and through FFB, and authorized, approved and arranged by DOE pursuant to the terms and conditions of the ATVM Program, Section 136 and the Applicable Regulations, in an aggregate principal amount at no time exceeding the lesser of:

- (i) with respect to the Karma Loan, (x) 100% of Eligible Karma Engineering Costs incurred and paid on or before the date of such Advance, (y) 80% of the sum of the Eligible Karma Engineering Costs *plus* the applicable Historical Costs incurred and paid on or before the date of such Advance (not counting for this purpose any such costs paid with the proceeds of indebtedness other than the Karma Loan or indebtedness that has been repaid or converted to equity prior to the Financial Closing Date (as defined in Section 20)), and (z) \$169,300,000 (such lesser amount, the “*Maximum Karma Loan Amount*”); and

(ii) with respect to the Kx Loan, provided that all conditions precedent under Section 21 to the initial Advance of the Kx Loan have been satisfied, (x) 100% of Eligible Kx Facility Costs incurred and paid on or before the date of such Advance, (y) 80% of the sum of the Eligible Kx Facility Costs *plus* the applicable Historical Costs incurred and paid on or before the date of such Advance (not counting for this purpose any such costs paid with the proceeds of indebtedness other than the Kx Loan or indebtedness that has been repaid or converted to equity prior to the Financial Closing Date), and (z) \$359,360,000 (such lesser amount, the “*Maximum Kx Loan Amount*”).

(b) The term “*Historical Costs*” means (i) with respect to the Karma Project those costs of the Karma Engineering Works paid on or prior to December 31, 2008 that would have been considered Eligible Karma Engineering Costs if they had instead been paid after December 31, 2008, and (ii) with respect to the Kx Project, those costs of the Kx Facility paid on or prior to December 31, 2008 that would have been considered Eligible Kx Facility Costs if they had instead been paid after December 31, 2008. For purposes of applying the limitations contained in Section 9(a), the parties have assumed that the Historical Costs are equal to \$44,300,000, in the case of the Karma Project, and that there were no Historical Costs incurred in the case of the Kx Project (in each case, the “*Historical Costs Assumption*”). In the event DOE determines that the Historical Costs Assumption with respect to the Karma Project does not accurately reflect the actual Historical Costs paid by Fisker with respect to the Karma Project, (x) DOE’s determination of actual Historical Costs for such Project shall thereafter be used for purposes of Section 9(a), (y) the next Advance(s) under the Karma Loan shall be reduced in an amount equal to (1) the aggregate amount of Advances theretofore made under the Karma Loan (as determined in accordance with the incorrect Historical Costs Assumption) *minus* (2) the aggregate amount of such Advances that would have been made had they been determined in accordance with the actual Historical Costs, and (z) Fisker shall certify that the Committed Equity Condition can be satisfied notwithstanding the effects of the foregoing clauses (x) and (y).

#### 10. *Availability*

(a) Subject to the terms of the Funding Agreements (as defined in Section 19(b) below), disbursements of the Loans (each, an “*Advance*”) may be requested from time to time (but no more frequently than twice during any calendar month) during the period (the “*Loan Availability Period*”) from (x) the Financial Closing Date to (y) the date that is 16 months following the Financial Closing Date with respect to the Karma Loan, or the date that is 33 months following Financial Closing Date with respect to the Kx Loan.

(b) Subject to satisfaction of the conditions precedent set forth in the Loan Documents, the proceeds of (x) Karma Loan Advances will be used to reimburse the Borrower for the payment of Eligible Karma Engineering Costs and (y) Kx Loan Advances will be used to reimburse the Borrower for the payment of Eligible Kx Facility Costs, in each case in accordance with the then current Business Plan. Subject to the terms of the Funding Agreements and other Transaction Documents, Advances to Fisker will be made in accordance with the following procedures:

(i) no less than ten business days prior to any Advance Date (as defined in Section 23 of this Term Sheet), Fisker shall provide DOE for its review and approval

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with (1) an advance request in accordance with Section 24(a), in sufficient detail and including wire transfer instructions and copies of invoices or other reasonable documentation evidencing the applicable Eligible Project Costs to be reimbursed, (2) a certificate executed by an authorized officer of Fisker certifying that (A) the proceeds of the Advance will be used solely to reimburse Fisker for applicable Eligible Project Costs paid by Fisker on or before the date of such Advance request, in accordance with the then current Business Plan and (B) the Eligible Project Costs being reimbursed, together with all other costs related to the Projects incurred during the current year (whether or not Eligible Project Costs), will not exceed the budgeted amounts for such year in the relevant line items of the Budget, (3) an updated Budget satisfactory to DOE, and (4) such other applicable documentation, certificates and information specified in this Term Sheet (including in Section 24, Section 23, where applicable, and, prior to the Financial Closing Date, Section 22);

(ii) subject to satisfaction by Fisker of all necessary conditions precedent specified in this Term Sheet, no less than three business days prior to any Advance Date, DOE shall provide the FFB with (1) the applicable advance request from Fisker described in clause (i) above and (2) an advance approval notice from DOE; and

(iii) pursuant to the foregoing, FFB will make Advances to Fisker to reimburse Fisker for the relevant Eligible Project Costs, as soon as commercially practicable, and in any event within three business days following receipt from DOE of the applicable advance request and advance approval notice specified above.

Fisker agrees that DOE shall only be required to use reasonable efforts to provide the FFB with the necessary Advance requests and advance approval notices within the time-frames specified above, but DOE shall in any event ensure that the FFB receives all such Advance requests and Advance approval notices as soon as practicable following receipt from Fisker of the applicable Advance requests and necessary certificates specified above (subject to Fisker satisfying all necessary conditions precedent specified in this Term Sheet, including in Section 24, Section 23, where applicable, and, prior to the Financial Closing Date, Section 22).

Fisker acknowledges and agrees that notwithstanding any other provision of this Term Sheet to the contrary, DOE shall not be required to approve any Advance unless the same has been requested and will be applied to reimburse Fisker for the applicable Eligible Project Costs previously paid by Fisker.

DOE reserves the right to retain, after consultation with Fisker and at Fisker's sole cost and expense, an independent engineer to review Advance requests, verify Fisker's application of the proceeds of the Loans, confirm Fisker's completion of the Milestones and perform such other similar tasks in connection with the administration of the Loans as may be required by DOE.

#### 11. *Interest Rate*

Subject to the terms of the Funding Agreements (as defined in Section 19 of this Term Sheet), each Advance shall have its own interest rate (the "*Interest Rate*"), which rate will be determined by the Secretary of the Treasury as of the date the respective Advance is made. The

Interest Rate for each Advance will be a rate per annum equal to the single equivalent rate for the payment stream on the Advance under the terms of the Funding Agreements. The single equivalent rate will be determined first by envisioning the payment stream on the Advance under the Funding Agreements as a payment stream on a series of bonds in which each bond has a principal amount equal to the level principal installment due on each payment date on the Advance, and each bond matures on the same date as a payment date on the Advance, and then by assigning to each serial bond a separate interest rate derived from the daily U. S. Treasury yield curve corresponding to each bond's maturity date. Then, a single equivalent rate is calculated and given to the Advance that produces the same payment stream that the sum of the payments on the individual serial bonds produces.

All overdue amounts on the Loans will accrue interest at the Late Charge Rate (as such term is defined in the promissory notes evidencing the Loans) to be determined, and be payable by the Borrower, in accordance with the Funding Agreements.

12. *Interest Payments*

Interest will accrue from the first Advance and thereafter be payable in cash in arrears on each quarterly payment date as specified in the Funding Agreements (each such date, a "*Payment Date*").

13. *Principal Amortization and Maturity*

The outstanding principal amount of the Karma Loan will be payable in equal quarterly installments commencing on the first Payment Date occurring not less than 36 months following the Financial Closing Date.

The final maturity of the Karma Loan will be the date that is the seventh anniversary of the Financial Closing Date.

The outstanding principal amount of the Kx Loan will be payable in equal quarterly installments commencing on the first Project Payment Date occurring not less than 39 months following the Financial Closing Date.

The final maturity of the Kx Loan will be the date that is the sixteenth anniversary of the Financial Closing Date.

14. *Prepayments of the Loans*

(a) Voluntary Prepayments.

(i) Subject to clause (c) below, any Advance may be prepaid in whole or in part at any time.

(ii) With respect to the Loans, the Borrower may prepay the Loans, in whole or in part, in an aggregate minimum amount of \$100,000 and integral multiples of \$100,000 in excess of that amount.

(b) Mandatory Prepayments. Subject to clause (c) below, and unless waived by DOE Fisker will make mandatory prepayments of borrowings under the Loans as follows:

(i) with any net proceeds received upon the permitted sale of any Collateral (as defined in Section 15) or other assets, except:

(1) inventory, including refurbished prototypes, sold in the ordinary course of business;

(2) non-exclusive licenses of intellectual property in the ordinary course of business on customary terms that do not impair the value of such intellectual property or any other assets as Collateral; and

(3) certain other limited customary exceptions to be agreed;

(ii) with any net casualty insurance proceeds received in connection with a fire or other casualty loss and any net condemnation proceeds from a taking of all or any portion of any property of the Borrower, in each case to the extent such proceeds are not applied to effect a complete restoration of the applicable property on terms and conditions customary for the handling of casualty or condemnation proceeds;

(iii) with the net proceeds of any warranty claims or other extraordinary receipts (*e.g.*, cash received by or paid to the account of Fisker not in the ordinary course of business from, for example, damage claims under purchase or construction contracts) with respect to any property of the Borrower, in each case to the extent such proceeds are not used to restore, repair or replace the affected property, or to pay or reimburse costs arising from the events giving rise to the payment of such proceeds or other receipts, all on terms and conditions customary for the handling of such proceeds or receipts;

(iv) with proceeds of any excess draws (*x*) under the Karma Loan to the extent an Agreed-Upon Procedures Report (as defined in Section 27(r) of this Term Sheet) provides that the proceeds of any Karma Loan Advance were not applied to pay Eligible Karma Engineering Costs or (*y*) under the Kx Loan to the extent an Agreed-Upon Procedures Report provides that the proceeds of any Kx Loan Advance were not applied to pay Eligible Kx Facility Costs;

(v) to the extent the outstanding principal amount of (*x*) the Karma Loan exceeds the then applicable Maximum Karma Loan Amount or (*y*) the Kx Loan exceeds the then applicable Maximum Kx Loan Amount; and

(vi) annually, commencing with FY 2013, in an amount equal to 20% of any Excess Cash Flow for such year, to be paid no later than March 31 of the following year ("*Excess Cash Flow*" shall be calculated as EBITDA (as defined in Schedule 1) *minus* any increases in non-cash working capital, *minus* interest and taxes paid, *minus* capital expenditures, *minus* scheduled debt amortization payments *minus* the number (if greater than zero) resulting from subtracting the amount of cash and cash equivalents held by the Borrower as of the end of such year from \$200 million *plus* any decreases in non-cash working capital).

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(c) All Prepayments. All prepayments of the Loans:

(i) are subject to the terms of the Funding Agreements and the Arrangement Agreement (as defined in Section 19 of this Term Sheet); and

(ii) will be applied:

(1) in each case of prepayments pursuant to clause (a) above, to remaining scheduled amortization payments, in the inverse order of maturity, under any of the outstanding Advances selected by the Borrower, as set forth in the Funding Agreements and the Arrangement Agreement; and

(2) in each case of prepayments pursuant to clause (b)(i), (ii), (iii) and (vi) above to remaining scheduled amortization payments, in the inverse order of maturity, under any of the Advances selected by DOE and outstanding in respect of the Kx Loan until such Loan is repaid in full, then in respect of the Karma Loan until such Loan is repaid in full, as set forth in the Funding Agreements and the Arrangement Agreement; and

(3) in each case of prepayments pursuant to clauses (b)(iv) and (v) above to remaining scheduled amortization payments, in the inverse order of maturity, under any of the Advances selected by DOE in its sole discretion and outstanding in respect of the relevant Loan, as set forth in the Funding Agreements and the Arrangement Agreement.

Any outstanding Loan amounts prepaid may not be re-borrowed, nor create availability for further borrowings during the applicable Loan Availability Period. Prepayments shall be made at a price equal to (i) in the event of a prepayment in whole of an Advance, the sum of (x) the price for such Advance that would, if such Advance (including all unpaid interest accrued thereon through the intended prepayment date) were purchased by a third party and held until maturity, produce a yield to such third party purchaser, for the period between the date of purchase and maturity substantially equal to the interest rate that would be set on a loan from the Secretary of the Treasury to FFB to purchase an obligation having a payment schedule identical to the payment schedule of such Advance for the period from the intended prepayment date to maturity, *plus* (y) all unpaid late charges accrued on such Advance through the intended prepayment date (the "*Prepayment Price*"), (ii) in the event of a partial prepayment of an Advance, a *pro rata* share of the Prepayment Price that would be required for a prepayment of the entire principal amount of such Advance, and (iii) in the event of a repayment in full of all outstanding Advances, the sum of the Prepayment Prices for all such outstanding Advances.<sup>3</sup>

15. *Collateral.*

The Loans will be secured prior to the Financial Closing Date, subject to limited exceptions as may be agreed in the Loan Documents, by a first priority security interest in and lien on all real, personal and intangible assets, all material contracts and all other rights of the

<sup>3</sup> Prepayment Price formulation subject to change to conform to final form of FFB documents.

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Borrower and all of the equity interest in the Borrower (collectively, the “*Collateral*”) in which a security interest can be created, including the following:

- (a) assignment of all revenues and account receivables;
- (b) assignment of all of the Borrower’s rights under any material project agreement, including agreements for the production of the Karma and Kx vehicles and dealer agreements;
- (c) all assignable governmental approvals held by the Borrower;
- (d) each of the Borrower’s bank accounts;
- (e) all permitted investments made with the deposits in any bank account;
- (f) the equity interests in the Borrower;
- (g) proceeds of insurance policies not required to be paid to a third party with DOE being named as additional loss payee and as additional insured;
- (h) all of the Borrower’s intellectual property, technical data including software, licenses, general intangibles and goodwill (subject to certain limited ordinary course exceptions to be agreed);
- (i) all real estate and leasehold interests of the Borrower (other than Borrower’s existing leasehold interests in certain office space in Pontiac, Michigan and Irvine, California);
- (j) all of the Borrower’s other assets, including all equipment, inventory, assets in the custody of Valmet or other third parties in the course of assembly, fabrication or manufacturing, receivables, investment property, contract rights, books and records and all other property of the Borrower (subject to certain limited ordinary course exceptions to be agreed); and
- (k) all proceeds of the foregoing.

For the avoidance of doubt, it is understood that all of the assets described in clauses (a) through (k) of this Section 15 shall be included in the Collateral whether or not financed or acquired with the proceeds of the Loans and the Applicant Commitments. The security interests granted in the Collateral will be made in favor of the United States of America, acting by and through DOE (and including FFB) or agents designated by them to act.

#### 16. *Debt Service Reserve*

The Company will create a special debt service reserve account (the “*Debt Service Reserve Account*”) that will be under the sole control of DOE and will at all times maintain a balance in that account equal to the principal and interest payments scheduled to come due on the Loans in the next six months (the “*Required Debt Service Reserve*”).

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17. *Facility Fee*

On the Financial Closing Date, the Borrower will pay to DOE a facility fee (the "*Facility Fee*") equal to 0.10% of \$528,660,000.

18. *Loan Administration*

Servicing and monitoring duties with respect to the Loans will be performed by DOE in accordance with the Arrangement Agreement.

**Transaction Documents**

19. *Loan Documents*

The agreements to be entered into with DOE and FFB in connection with the Loans are expected to include the following, each of which must be satisfactory in form and substance to DOE (collectively, the "*Loan Documents*"):

(a) a Loan Arrangement and Reimbursement Agreement (the "*Arrangement Agreement*") between the Borrower and DOE, setting forth, *inter alia*, (i) an undertaking by DOE to arrange for the Loans to be made by and through FFB, (ii) conditions to funding of the Loans, (iii) representations, warranties and covenants to be made by the Borrower in favor of DOE, (iv) events of default that will trigger exercise of remedies under the Loan Documents and (v) reimbursement obligations;

(b) all documents and agreements necessary or desirable in connection with the making by FFB of the Loans (the "*Funding Agreements*"), including:

(i) the Program Financing Agreement between DOE and FFB (the "*Program Financing Agreement*"), in substantially the form attached as Exhibit A hereto;

(ii) the Note Purchase Agreement among the Borrower, DOE and FFB, in substantially the form attached as Exhibit B hereto;

(iii) future advance promissory notes evidencing the Loans issued by the Borrower and payable to FFB (the "*Project Promissory Note*"), in substantially the form attached as Exhibit C hereto;

(iv) any other agreements required in connection with the funding of the Loans by FFB;

(c) Security Documents (as defined in Section 20 below); and

(d) such other documents and agreements as may be required under the Program Requirements.



20. *Security Documents*

The Security Documents to be entered into in connection with the Loans are expected to include the following, each of which must be satisfactory to DOE in form and substance and include detailed terms and conditions necessary and appropriate to protect the interests of the United States, including DOE and FFB, in the Collateral in the case of any default or event of default, including ensuring availability (and delivery, in the case of technical data including software and any other applicable assets) of all the intellectual property rights, technical data including software, other books and records, real property, physical assets and all other rights necessary for any person or entity, including DOE, to complete, operate, convey, and dispose of any part of the Collateral (collectively, the “*Security Documents*”):

(a) agreements collaterally assigning the Project Documents (as defined in Section 21 of this Term Sheet);

(b) agreements collaterally assigning all governmental approvals, licenses and permits for the Projects;

(c) (i) consents or recognition agreements from (x) counterparties to the Project Documents (as defined in Section 21 below) requested by DOE, and (y) any applicable governmental authorities, as appropriate, with respect to the collateral assignment of any governmental approvals and licenses and the transfer thereof following an event of default and (ii) landlord estoppel certificates and lien waiver and collateral access agreements from applicable landlords, vendors and warehouse owners to permit DOE to exercise remedies against and take possession of the applicable Collateral;

(d) agreements collaterally assigning all intellectual property, licenses, technical data including software, general intangibles and goodwill of the Borrower;

(e) agreements mortgaging all real property owned, or leasehold interests held, by the Borrower (except as provided in Section 15(i)) and providing access, easements and other rights with respect to all real property owned or leased by the Borrower;

(f) deposit and securities account control agreements under which, *inter alia*, DOE will have sole control over the relevant accounts upon the occurrence and during continuance of an Event of Default;

(g) an agreement establishing the Debt Service Reserve Account with a collateral trustee (the “*Collateral Trustee*”) selected by DOE and requiring that the Company maintain a balance in such account equal to the Required Debt Service Reserve;

(h) any agreements or instruments required to perfect a security interest in any Collateral located in Finland or elsewhere outside the United States;

(i) a pledge agreement by Holding of its shares in Fisker and a guarantee by Holding of all of Fisker’s obligations under the Loan Documents; and

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(j) all other agreements and instruments necessary to create a first priority perfected security interest under applicable law in the Collateral.

The Borrower will pay all costs in connection with the pledge, perfection and maintenance of the Collateral and the Security Documents, including registration, recording taxes, notarization, and filing fees and charges. All costs associated with the use of a Collateral Trustee will be paid by the Borrower. In addition to acting as a holder of the Debt Service Reserve Account, DOE may require the Collateral Trustee to perform other functions under the Loan Documents. In such event, the Loan Documents will be modified to so provide.

## 21. *Project Documents*

The Borrower will give DOE reasonable advance notice before entering into, or agreeing to any material amendment or modification to, any of the following agreements (the “*Project Documents*”):

- (a) the Assembly Agreement related to the Karma vehicle with Valmet Automotive, Inc.;
- (b) the Powertrain Development Agreement related to the development by Quantum Fuel Systems Technologies of the powertrain for Fisker vehicles;
- (c) the Design Development Agreement related to the design responsibilities of Fisker Coachbuild, LLC with respect to Fisker vehicles;
- (d) the license with Fisker Coachbuild, LLC relating to the Fisker trademark;
- (e) purchase orders with contractors satisfactory to DOE for engineering and tooling relating to the Karma and Kx vehicles and their components (including such purchase orders and engineering services contracts as are necessary for the Karma Engineering Works and the Kx Facility);
- (f) agreements with contractors satisfactory to DOE to manufacture each component required for the Karma and Kx vehicles;
- (g) leases for office space in Irvine, California and Pontiac, Michigan;
- (h) purchase agreements satisfactory to DOE with respect to real property to be acquired for the manufacturing of the Kx vehicle;
- (i) construction or re-equipping contracts in connection with the establishment of the Kx vehicle manufacturing facility;
- (j) other agreements as may be identified by DOE’s further due diligence; and
- (k) all other material agreements necessary for the consummation of the Projects.

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The terms of each Project Document that relate to DOE's security interest therein must be on terms and conditions satisfactory to DOE. In addition, with respect to the other terms and conditions of such Project Documents, Fisker will not enter into such Project Document unless DOE shall have been given a reasonable period within which to object to such other terms and such objections, if any, shall have been addressed to the reasonable satisfaction of DOE. All Project Documents shall contain provisions consenting to their assignment to DOE or a representative as collateral for the Loans, allowing DOE or its representative to exercise and enforce all of Fisker's rights thereunder, give DOE satisfactory inspection rights, require that DOE be given notice of Fisker defaults and an opportunity to cure the defaults, and such other provisions for DOE's benefit as it may reasonably request. In the alternative, Fisker may arrange for the relevant supplier to enter into a separate agreement with DOE to the foregoing effect.

The Loan Documents and the Project Documents are collectively referred to as the "*Transaction Documents*".

### **Financial Closing, Project Loan Advances and Conditions Precedent**

#### ***22. Conditions Precedent to Financial Closing Date***

The financial closing of the Loans is subject to closing conditions as are usual and customary for financings of this type, as are required under the Program Requirements or as are otherwise deemed appropriate by DOE for this transaction in particular, including satisfaction as of the date of such financial closing (the "*Financial Closing Date*") of the following conditions precedent (with respect to such Financial Closing Date, the "*Initial Conditions Precedent*"), each of which must be to the satisfaction of DOE:

(a) **Due Diligence Review.** DOE shall have completed its due diligence review of the Projects and all other matters related thereto, and the results thereof shall be satisfactory to DOE, including that no material issues exist with respect to the Projects under the laws of the States of Michigan, California and the state in which the Kx Project manufacturing facility will be located or any subdivision or local jurisdiction thereof;

(b) **Organization of Borrower and Holding.** Delivery of organizational documents in form and substance satisfactory to DOE of the Borrower and Holding;

(c) **Receipt of Corporate Approvals; Company Certificates.** Delivery, in form and substance satisfactory to DOE of (i) certificates and documents evidencing the Borrower's and Holding's receipt of all board, stockholder and other corporate approvals to enter into any Transaction Document to which it is a party and fully implement and perform the terms thereof, and (ii) a secretary's certificate of the Borrower and Holding to which resolutions and good standing certificates are attached;

(d) **Information.** Delivery of a certificate of the Borrower certifying that, as of the Financial Closing Date, the information contained in the Application, together with all other information delivered by or on behalf of the Borrower in connection with such Application and the negotiation of the Transaction Documents, including the Information Certificate delivered by the Applicant to DOE on the date hereof is true and complete in all material respects and does not contain any untrue statement of a material fact or omit to state a material fact necessary in

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order to make the statement contained therein not misleading in light of the circumstances under which such statements were made (it being understood that in the case of projections, such projections are based on estimates which are reasonable as of the date such projections are stated or certified);

(e) Transaction Documents. Execution and delivery of all Transaction Documents, in form and substance satisfactory to DOE together with evidence that such Transaction Documents (i) contain all terms and conditions DOE deems necessary or desirable to protect the interests of the United States, including DOE and FFB and (ii) are in full force and effect;

(f) Security Interests. Perfection of all requisite security interests in the Collateral and delivery all necessary waivers, amendments, approvals and consents authorizing the pledge of such Collateral;

(g) Debt Service Reserve. Funding of the Debt Service Reserve Account in an amount of not less than the Required Debt Service Reserve;

(h) Lien Searches. Receipt of lien searches, satisfactory to DOE in each of the jurisdictions in which the Uniform Commercial Code financial statements or other filings should be made, revealing no liens on the Collateral, aside from permitted liens;

(i) Existing Debt. Repayment or redemption of all other outstanding debt, past due accounts payable or mandatorily redeemable stock except as approved by DOE;

(j) Existing Collateral. Releases of all liens on any Collateral in favor of any other person except for customary ordinary course permitted liens not securing indebtedness (other than certain limited ordinary course permitted indebtedness to be agreed);

(k) Legal Opinions and Similar Documents. Delivery of such legal opinions as are usual and customary in secured financings rendered by counsel to Borrower, as well as any additional legal opinions, bring-down certificates, reliance letters and similar documents as DOE may request;

(l) Financial Statements. Delivery of any financial statements and compliance certificates then required to be delivered by the Borrower, not later than 15 business days prior to the Financial Closing Date;

(m) Business Plan. Delivery of an updated Business Plan in form and substance satisfactory to DOE, including the information provided for in Section 4 of this Term Sheet;

(n) Eligible Project Costs. Receipt of all information with respect to Eligible Project Costs incurred and paid by the Borrower as of the date 10 business days prior to the Financial Closing Date, including breakdowns of such information as DOE may request, all certified by an authorized officer of the Borrower;

(o) Permits. All environmental, regulatory, construction and other permits and approvals then required for the Karma Project shall be in place and not be subject to waiting periods or appeal;

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- (p) Consents. Receipt of all consents and waivers required pursuant to any contractual obligation that would prohibit the Borrower or Holding from executing and performing its obligations under the Transaction Documents;
- (q) Insurance. Receipt of a satisfactory report and associated closing certificate from the Borrower's insurance advisor to the effect that the Borrower has obtained the Required Insurance (as defined in Section 31 below);
- (r) Karma Project Intellectual Property. The Borrower owns or has licensed all intellectual property rights necessary for the Karma Project and has resolved in a manner satisfactory to DOE all of the trademark infringement claims described in the Information Certificate;
- (s) Exchange Risk. The Borrower has demonstrated to DOE that it has a commercially reasonable strategy with respect to its foreign exchange exposures, including satisfactory arrangements to hedge FX exposure under the Valmet Assembly Agreement.;
- (t) Collateral Value. DOE has determined that there has been no material impairment in the value of the Collateral, as set forth in the Collateral Value Certificate, attached hereto as Exhibit D;
- (u) Payment of the Facility Fee. Payment of the Facility Fee due and payable on the Financial Closing Date;
- (v) Status as Eligible Applicant; Eligible Project. Certification of the Borrower that since execution of the Conditional Commitment Letter no event has occurred that affects or alters (i) Borrower's status as an Eligible Applicant, as described in the Applicable Regulations and (ii) each Project's designation as an Eligible Project, as defined in the Applicable Regulations;
- (w) Evidence of No Judgment Liens. Delivery of satisfactory lien searches showing that no judgment liens exist against any of Fisker's properties for a debt owed to the United States of America;
- (x) Lobbying Certification. Certification of Fisker that is required to be filed by recipients of federal loans regarding lobbying, in the form set forth in Appendix A to 31 CFR Part 21 and, if required under 31 CFR Part 21, disclosure forms to report lobbying, in the form set forth in Appendix B to 31 CFR Part 21;
- (y) Liquidity Commitments. Evidence of satisfactory commitments to provide Fisker with an aggregate of \$50,000,000 in cash liquidity as contemplated in the Business Plan from one or more financing sources acceptable to DOE which may be in the form of: (i) a revolving credit facility (or facilities) in form and substance satisfactory to DOE, (ii) commitments to make equity investments in form and substance satisfactory to DOE, or (iii) such other arrangements as shall be in form and substance satisfactory to DOE;
- (z) Additional Equity. Receipt of not less than \$157.8 million in proceeds from the Minimum Additional Equity; and

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(aa) Other Documents and Information. Receipt by DOE and FFB of any other certificates, documents, agreements and information respecting the Borrower or Holding as may have been requested.

23. *Conditions Precedent to Initial Advance Under the Kx Loan*

The making of the first Advance under the Kx Loan is subject to conditions as are usual and customary for financings of this type, as are required under the Program Requirements or as are otherwise deemed appropriate by DOE for this transaction in particular, including satisfaction as of the date of the related Advance Date (as defined in Section 22) of the following conditions precedent, each of which must be to the satisfaction of DOE:

(a) Kx Site Acquisition. The Borrower shall have acquired a site in the United States (the "*Kx Facility Site*") on which the manufacturing and assembly facility for the Fisker Kx vehicle will be located together with all necessary easements and other real property interests related thereto;

(b) Environmental Review. Delivery of Phase I environmental site assessment prepared in accordance with ASTM standards (and delivery of a Phase II environmental site assessment prepared in accordance with ASTM standards if required by DOE) and associated reliance letters requested by DOE and satisfaction of any additional environmental requirements then required for the Kx Facility and Kx Facility Site (including required mitigations and completion of the National Environmental Policy Act of 1969 ("*NEPA*") process and any applicable state environmental review process);

(c) Permits. All environmental, regulatory, construction and other permits and approvals then required for the Kx Facility Site and its use in the manufacturing and assembly of the Kx vehicle shall be in place and not be subject to waiting periods or appeal;

(d) Kx Project Intellectual Property. The Borrower owns or has licensed all intellectual property rights necessary for the Kx Project;

(e) Mortgage. The Borrower shall have executed and delivered a mortgage or deed of trust in favor of DOE for the Kx Facility Site and all related real property interests, together with a fixture filing, and delivered to DOE an ALTA survey of such real property, evidence of zoning and legal compliance, a structural engineer's report (if applicable), and ALTA mortgagee's policy with applicable endorsements and any other customary deliveries, all of the foregoing in form and substance satisfactory to DOE;

(f) Receipt of Corporate Approvals; Company Certificates. Delivery, in form and substance satisfactory to DOE of (i) certificates and documents evidencing the Borrower's and Holding's receipt of all board, stockholder and other corporate approvals to acquire the Facility Site, enter into any Project Documents related thereto and any Security Documents required by this Section 21, and (ii) a secretary's certificate of the Borrower and Holding to which resolutions and good standing certificates are attached;

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(g) Legal Opinions and Similar Documents. Delivery of such legal opinions as are usual and customary in real estate and mortgage acquisitions, as well as any additional legal opinions, bring-down certificates, reliance letters and similar documents as DOE may request;

(h) Appraisal. Delivery of an appraisal of the Kx Facility Site which is consistent with the "Uniform Standards of Professional Appraisal Practice," promulgated by the Appraisal Standards Board of the Appraisal Foundation, and performed by licensed or certified appraisers approved by DOE; and

(i) Other Conditions. Such other conditions as DOE may deem appropriate.

24. *Conditions Precedent to Each Advance Date*

Each Advance of the Loans, including the initial Advance, is subject to the satisfaction as of the date of such Advance (the "*Advance Date*") of the following conditions precedent, which must be to the satisfaction of DOE:

(a) Advance Request and Invoices. Receipt, no later than ten business days prior to such Advance Date, of an advance request, substantially in the form attached as Exhibit E, from the Borrower, in sufficient detail and including wire transfer instructions and copies of invoices, together with Borrower certification as to the satisfaction of all conditions precedent to such Advance, together with an updated Budget;

(b) Representations and Warranties. All representations and warranties shall be true and correct in all material respects, *provided* that any representation and warranty relating solely to an earlier date shall be true and correct in all material respects as of such date;

(c) No Default. No default or event of default shall have occurred and be continuing, before and after giving effect to the subject Advance;

(d) No Material Adverse Change. No event shall have occurred or could reasonably be expected to occur with respect to either Project, Fisker or any of its subsidiaries or the Collateral that could reasonably be expected to have a material adverse effect on either Project, Fisker or any of its subsidiaries, taken together as a whole, or the value of the Collateral, or the enforceability of any Transaction Documents (a "*Material Adverse Effect*");

(e) Availability of Funds. (i) the Committed Equity Condition has been met as of such Advance Date and (ii) the Borrower has satisfied the requirements of Section 10 of this Term Sheet with respect to the related Advance;

(f) Prior Advances. The most recent Agreed-Upon Procedures Report (as defined in Section 27(r)) demonstrates that all Advances made during the immediately preceding calendar quarter under each Loan (or, if no Advances under a given Loan were made during the immediately preceding calendar quarter, the most recently preceding calendar quarter in respect of which Advances were made under such Loan) have been applied to reimburse the Borrower for Eligible Karma Project Costs or Eligible Kx Project Costs, as the case may be;

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(g) Aggregate Advances. The aggregate principal amount of (i) all outstanding Karma Loan Advances, after giving effect to such Advance, will not exceed the Maximum Karma Loan Amount and (ii) all outstanding Kx Loan Advances, after giving effect to such Advance, will not exceed the Maximum Kx Loan Amount;

(h) Applicant Project Payments and Cost Overruns. (i) The Borrower has paid with Applicant Karma Project Payments or Applicant Kx Project Payments the amount of Eligible Project Costs or Historical Costs required to have been paid by Section 6 as of such Advance Date; (ii) immediately following such Advance Date, (A) the aggregate amount of Applicant Karma Project Payments made by the Borrower (with funds other than proceeds of the Karma Loan or other indebtedness) and applied to Eligible Karma Engineering Costs or related Historical Costs shall equal or exceed 20% of the aggregate Eligible Karma Engineering Costs incurred and paid by the Borrower as of such Advance Date, and (B) the aggregate amount of Applicant Kx Project Payments made by the Borrower (with funds other than the proceeds of the Kx Loan or other indebtedness) and applied to Eligible Kx Facility Costs or related Historical Costs shall equal or exceed 20% of the aggregate Eligible Kx Facility Costs incurred and paid by the Borrower as of such Advance Date; and (iii) the Borrower has paid any Cost Overruns required to have been paid as of such Advance Date;

(i) Advance Proceeds. The proceeds of all Advances to be made will be used to reimburse the Borrower for Eligible Karma Project Costs or Eligible Kx Project Costs, as the case may be, that have been paid by the Borrower on or before the dates of the applicable advance requests and not reimbursed with the proceeds of prior Advances under the relevant Loan;

(j) Milestones. All Milestones contemplated to be achieved as of such Advance Date have been substantially completed and Fisker shall have delivered a certificate to DOE to the foregoing effect;

(k) No Litigation. No material legal or arbitral proceedings are pending or threatened against the Borrower or Holding that have not otherwise been disclosed to and waived by DOE;

(l) No Illegality. No applicable law or regulation, in the judgment of DOE, that restrains, prevents or imposes materially adverse conditions upon the transactions contemplated hereby;

(m) Lien Waivers. (i) Any unpaid balances or unsettled claims with contractors or suppliers that could become liens on the Collateral have been paid or are being contested or negotiated in good faith to the satisfaction of DOE, and (ii) all mechanics liens or other liens of such contractors or suppliers have been released to the satisfaction of DOE;

(n) Other. Delivery of such bring-down certificates and similar documents as DOE may request;

(o) Governmental Requirements. Satisfaction of (i) all requirements and approvals pursuant to the Program Requirements, and (ii) all other statutory, regulatory, or other governmental requirements of general applicability to Section 136 applicants;



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(p) Governmental Approvals. Copies of all material governmental approvals, permits (including building permits or notices of commencement) or consents not previously delivered but required for construction, operation or maintenance of the Projects and such other governmental approvals, permits or consents as DOE may request or as may be required under the Transaction Documents;

(q) Perfection of Security Interests. Determination by DOE that all actions necessary or, in the opinion of DOE, desirable to create and maintain the United States', including DOE's and FFB's, perfected interests in the Collateral (including after-acquired Collateral) have been taken;

(r) Davis-Bacon Act. Certification by the Borrower of compliance with the obligation to pay prevailing wages to all laborers and mechanics employed by contractors or subcontractors during construction, alteration or repair of assets that are financed through the ATVM Program;

(s) No Change to Project Completion Outside Date. Certification by Fisker that the completion of each Project is reasonably expected to occur on or before the relevant Milestone Completion Date specified therefor in the Business Plan approved by DOE on the Financial Closing Date; and

(t) Additional Documents. Such other documents, opinions, certifications or consents relating to the Projects or the matters contemplated by the Transaction Documents as DOE may request.

### **Representations, Covenants and Defaults**

#### ***25. Representations and Warranties***

The Loan Documents will contain such representations and warranties regarding the Borrower and Holding as are usual and customary for financings of this kind or are otherwise deemed appropriate by DOE for this transaction in particular (with qualifications and scheduled exceptions to be agreed), including:

- (a) due organization and valid existence;
- (b) good standing and qualification to do business;
- (c) power and authority (including all authority necessary for development, completion of construction and operation of the Projects);
- (d) capitalization, ownership and organization;
- (e) solvency;
- (f) status of Borrower as an Eligible Applicant, as described in the Applicable Regulations;

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- (g) status of the Karma Engineering Works and the Kx Facility as Eligible Projects, as defined in the Applicable Regulations;
- (h) enforceability of Transaction Documents;
- (i) no conflicts;
- (j) no consents or approvals required to consummate transactions;
- (k) no material agreements (except as disclosed);
- (l) no litigation (except as scheduled in the Information Certificate);
- (m) existing indebtedness;
- (n) no judgments or orders (except as scheduled in the Information Certificate);
- (o) no defaults;
- (p) compliance with law and Program Requirements;
- (q) Investment Company Act and other regulatory matters;
- (r) no margin stock; proceeds of the Loans shall not be used to purchase margin stock in violation of applicable law;
- (s) no corrupt or prohibited practices;
- (t) financial statements, disclosure and projections, Business Plan and Information Certificate;
- (u) title to properties;
- (v) no liens, except for customary ordinary course permitted liens not securing indebtedness (other than certain limited ordinary course permitted indebtedness to be agreed);
- (w) operation of business consistent with Business Plan;
- (x) Borrower ownership and sufficiency of assets and necessary assignments with respect to each Project;
- (y) availability and adequacy of utility and technology rights and other services for the Projects;
- (z) rights to intellectual property;
- (aa) perfection and priority of security interests;

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- (bb) location of books and records;
- (cc) taxes;
- (dd) necessary creditor (and other third party) consents and government permits and approvals;
- (ee) environmental and safety matters;
- (ff) labor matters and employment agreements;
- (gg) ERISA matters;
- (hh) accuracy of representations and warranties in other Project Documents;
- (ii) location of chief executive office and chief operating office;
- (jj) identification of top five members of senior management team and their incentive arrangements as of the Financial Closing Date (which shall be satisfactory to DOE);
- (kk) USA Patriot Act;
- (ll) no embargoed person;
- (mm) no fraudulent conveyance;
- (nn) insurance;
- (oo) Holding's status as special purpose holding company with no other assets (other than the equity in the Borrower) and no liabilities;
- (pp) no restricted payment has been made since a date to be agreed upon by the parties; and
- (qq) no event having a Material Adverse Effect.

26. *Financial Covenants*

The Loan Documents will contain provisions regarding compliance with the financial covenants described on Schedule 1 (the "*Financial Covenants*").

27. *Affirmative Covenants*

In addition to the other covenants described herein, the Loan Documents will contain such affirmative covenants as are usual and customary for financings of this kind or as are otherwise deemed appropriate by DOE for this transaction in particular (with qualifications and exceptions to be agreed) from the Borrower and Holding, including regarding:

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- (a) use of proceeds;
- (b) maintenance of existence;
- (c) conduct of each Project substantially in accordance with the Business Plan;
- (d) commercially reasonable best efforts to develop and implement each Project substantially in accordance with the Business Plan;
- (e) operation and maintenance of each Project;
- (f) maintenance of security interests;
- (g) performance of Transaction Documents and material agreements by the Borrower and Holding;
- (h) provision by each of Holding and Fisker of financial statements and financial reporting and customary compliance certificates, including demonstration that Fisker has satisfied the Financial Covenants;
- (i) provision of a description of any material changes to any existing, and copies of any new, Project Document;
- (j) provision of a description of any material claims brought against Holding, the Borrower or any of the Borrower's subsidiaries or any labor disputes;
- (k) provision of updated construction budgets and construction progress reports with respect to the Kx Facility;
- (l) provision of monthly reports describing any changes in the Budget line items for each Project which are not otherwise subject to DOE approval as described in Section 4(b);
- (m) provision of periodic operating budgets and reports (including as to unit sales);
- (n) provision of periodic reports (not more frequently than monthly) describing recent purchase orders and any deviations from Borrower's DOE approved form of purchase order terms and conditions in such purchase orders (whether or not such deviations are otherwise subject to DOE approval as described in Section 19);
- (o) provision of default notices and other material events and information, including (i) material transactions, (ii) ratings changes, if applicable, (iii) receipt of material insurance proceeds with respect to the Collateral or other assets, (iv) events having or reasonably likely to have a Material Adverse Effect, (v) change of control, (vi) judgment notices, (vii) non-ordinary course notices given or received under the Project Documents, and (viii) changes in accounting policies;

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- (p) provision of updated Business Plans at regular intervals to be agreed in the Loan Documents reflecting certain financial covenants/performance metrics and the other information required pursuant to Section 4;
- (q) subject to reasonable measures implemented to ensure confidentiality of information provided, consistent with FOIA, the Program Requirements and other applicable law, cooperation with DOE requests for continuing due diligence reviews with respect to Holding, the Borrower and the Borrower's subsidiaries, the Collateral and any aspect relating to the Projects, including DOE requests for reports on the technical and financial performance of the Projects;
- (r) provision within 45 calendar days following the Financial Closing Date and quarterly thereafter within 45 calendar days, of an Agreed-Upon Procedures Report satisfactory to DOE (the "*Agreed-Upon Procedures Report*") by the Borrower's independent certified public accounting firm (the "*Independent Auditor*") certifying that the proceeds of each Advance made during such calendar quarter with respect to a Project were used, in each case, to reimburse the Borrower for Eligible Project Costs related to such Project that were incurred and paid by the Borrower on or before the date of the applicable advance request in accordance with the Business Plan, the Loan Documents and the Applicable Regulations;
- (s) maintenance of and compliance with permits, licenses, approvals and consents in connection with each Project;
- (t) compliance with laws and Program Requirements;
- (u) compliance with Office of Foreign Assets Control rules and regulations;
- (v) environmental and safety matters, including with respect to compliance with NEPA and applicable state environmental laws and delivery of any environmental audits and assessments;
- (w) maintenance of operations in a manner which will not require registration under the Investment Company Act;
- (x) maintenance of Required Insurance and application of proceeds thereof;
- (y) payment of taxes, etc.;
- (z) maintenance of adequate accounting, management information and cost control systems;
- (aa) maintenance of BDO Seidman or other independent auditors acceptable to DOE;
- (bb) maintenance of books and records and allowing inspection thereof and of all other property of Fisker and its subsidiaries (and allowing DOE and its representatives to discuss their affairs, finances and accounts with their officers and auditors),

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including (i) such records as are necessary to facilitate an effective and accurate audit and performance evaluation of each Project as required by the Program Requirements and (ii) provision to FFB, DOE and U.S. Government Accountability Office and its representatives and advisors of access to the premises of the Borrower and its subsidiaries and to the production and assembly facilities related to each Project at all reasonable times in order to monitor the progress of the Projects;

- (cc) maintenance of properties and title thereto;
- (dd) maintenance of intellectual property, including know-how and trade secrets, and appropriate documentation and record-keeping in respect thereof;
- (ee) compliance with contractual obligations;
- (ff) compliance with debarment regulations;
- (gg) disclosure and management of Cost Overruns;
- (hh) upon request of DOE, provision and updated information of the type referred to in 10 CFR 611.101(k);
- (ii) return to FFB any investment earnings realized by the Borrower in connection with the Loan proceeds in excess of the accrued interest expense due and payable by the Borrower pursuant to the Loan Documents;<sup>4</sup>
- (jj) ongoing obligation to pay prevailing wages to all laborers and mechanics employed by contractors or subcontractors during construction, alteration or repair that is financed through the ATVM Program;
- (kk) coordination of public statements by Borrower with DOE/FFB;
- (ll) provision of additional information at the request of DOE or FFB;
- (mm) remediation of environmental contamination; and
- (nn) further assurances.

## 28. *Negative Covenants*

In addition to the other covenants described herein, the Loan Documents will contain such negative covenants as are usual and customary for financings of this kind or as are otherwise deemed appropriate by DOE for this transaction in particular (with qualifications and exceptions to be agreed), from the Borrower and Holding, including regarding:

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<sup>4</sup> To be conformed to FFB documents.

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- (a) no material change to either Project or engaging in business activities unrelated to the Projects; provided that until the first Advance of the Kx Loan occurs activities related to the Kx Project may be funded only with proceeds of equity raised in excess of the first \$85 million of Minimum Additional Equity;
- (b) no act or omission that would cause (i) the Karma or the Kx not to be qualifying advanced technology vehicles or (ii) the activities of the Borrower not to constitute Eligible Projects (in each case within the meaning of 10 CFR Part 611);
- (c) limitation on incurrence of additional debt, capital leases or guarantees (subject to limited exceptions to be agreed including (i), up to \$50,000,000 of revolving credit loans may be incurred under a working capital facility to meet expected working capital needs (commencing in 2010 for the Karma Project and 2012 for the Kx Project), *provided that* (A) the terms of such facility are satisfactory to DOE, and (B) any liens securing the indebtedness under such facility extend only to inventory and receivables and are made subject and subordinate to, or *pari passu* with, the liens securing the DOE loans, and (C) the lenders under such facility enter into an intercreditor agreement that is satisfactory to DOE and (ii) cash collateralized letters of credit in an amount to be agreed;
- (d) limitation on liens (other than the liens securing the working capital facility and letters of credit referred to in Section 28(c), and customary exceptions to be agreed);
- (e) prohibition on dividends and distributions, redemption or repurchase of equity (other than ordinary course repurchases of restricted stock from departed employees (subject to limitations to be agreed)), payments on subordinated debt (or any redemption, repurchase or defeasance thereof) and other restricted payments (including any such payments with respect to preferred stock), it being understood that payment of trademark license fees to Fisker Coachbuild will be treated as a restricted payment at any time when there is an uncured default or event of default;
- (f) limitation on acquisitions and dispositions of assets or capital expenditures, (including the acquisition of Fisker Coachbuild pursuant to the purchase option contained in the Borrower's Stockholders' Agreement and expenditures not contemplated in a Budget approved by DOE);
- (g) no merger, consolidation, or similar action;
- (h) limitation on lease transactions;
- (i) limitation on investments;
- (j) no subsidiaries without DOE's consent;
- (k) no changes to charter, organizational documents, or stockholder agreements in a manner that is materially adverse to the DOE's interests as a lender;

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- (l) limitation on termination, amendment or waiver of any provision of any Project Document;
- (m) limitation on issuance of equity other than for the purpose of funding the Projects (including the issuance of any options, warrants, or other rights with respect thereto; it being understood that options issued pursuant to employee stock option plans approved by DOE will be permitted);
- (n) limitation on changes to capital structure (including the issuance of any options, warrants, or other rights with respect thereto; it being understood that options issued pursuant to employee stock option plans approved by DOE will be permitted);
- (o) limitation on entering into transactions with affiliates, other than pursuant to Transaction Documents on an arm's length basis (any transactions with shareholders or their affiliates (whether pursuant to the existing development agreements or otherwise) must be approved by a majority of disinterested directors);
- (p) no speculative or hedging transactions, other than as specifically permitted or required;
- (q) limitation on entering into joint venture agreements;
- (r) no material modifications of the Business Plan or the Budget without the prior written consent of DOE;
- (s) no prepayment, redemption, repurchase or defeasance of other senior debt prior to maturity without the consent of DOE;
- (t) limitation on sale and leaseback transactions;
- (u) no entering into any agreement that prohibits creation of any lien, other than the Loan Documents;
- (v) no use of proceeds of the Loans to pay interest payments on the Loans, administrative or other fees relating to the Loans or any other amounts payable under the Loan Documents;
- (w) limitation on activities of Holding to ownership of Fisker and activities related thereto;
- (x) no changes in fiscal year;
- (y) no changes in accounting principles except as required by GAAP;
- (z) with respect to Project Documents, the requirement that they not include, and with respect to any other contracts entered into by Fisker or any of its subsidiaries after



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the date hereof the loss of which would be reasonably expected to have a Material Adverse Effect, the requirement that Fisker use commercially reasonable efforts to avoid or limit inclusion in such contracts of, any provisions restricting their assignment as Collateral or causing or giving the counterparty the right to cause such contracts to be terminated or materially impaired as a result, directly or indirectly, of any event of default or exercise of remedies under the Loan Documents.

29. *Events of Default*

The Loan Documents will include such events of default as are usual and customary for financings of this kind or as are otherwise deemed appropriate by DOE for this transaction in particular (with materiality qualifications, exceptions and grace periods to be agreed), including:

- (a) failure to make payments when due;
- (b) default under any other indebtedness (other than the Loans);
- (c) the outstanding principal amount of the Karma Loan exceeds the Maximum Karma Loan Amount or the outstanding principal amount of the Kx Loan exceeds the Maximum Kx Loan Amount;
- (d) breach of representations and warranties under any Loan Documents;
- (e) breach of covenants under any Loan Documents;
- (f) admission by the Borrower or Holding of the inability to, or intention not to, perform material obligations under the Loan Documents;
- (g) default by any of Holding, Fisker or Fisker's subsidiaries in the performance of any Project Document;
- (h) failure to fund when required or other default with respect to the Applicant Commitments;
- (i) loss or impairment of government permits or approvals that could reasonably be expected to have a Material Adverse Effect;
- (j) bankruptcy, insolvency, dissolution or other similar events of any of Holding, Fisker or its subsidiaries;
- (k) (i) judgments against any of Holding, Fisker or Fisker's subsidiaries for the payment of money in excess of an agreed upon amount to the extent not covered by insurance acceptable to DOE and as to which the insurance company has acknowledged coverage, which remains unsatisfied for a period of 30 days and during which period a stay of enforcement shall not be in effect; or (ii) non-monetary judgments that could reasonably be expected to have a Material

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Adverse Effect and which remain in force for a period of 30 days and during which period a stay of enforcement shall not be in effect;

- (l) certain ERISA events;
- (m) occurrence of specified *force majeure* events and continuation thereof for 180 days;
- (n) condemnation or assumption of custody of all or any substantial part of the property of any of Holding, Fisker or Fisker's subsidiaries by any governmental authority or any governmental authority taking action to displace the management of any of Fisker or its subsidiaries;
- (o) lapse or termination of any Required Insurance;
- (p) any change of control (to be defined in the Loan Documents) without DOE consent;
- (q) certain key personnel (to be agreed) no longer being responsible for the management of Fisker, unless approved by DOE;
- (r) failure generally, or admission in writing, of inability to pay debts when such debts become due;
- (s) occurrence or reasonable expectation of occurrence of any event with respect to Holding, the Borrower or any of the Borrower's subsidiaries that could reasonably be expected to have a Material Adverse Effect;
- (t) impairment of security interests in Collateral;
- (u) invalidity, unenforceability or termination of Transaction Documents;
- (v) physical destruction or condemnation of real property owned or leased by Valmet, the Borrower or any of its subsidiaries that could reasonably be expected to have a Material Adverse Effect and that has not been repaired with the proceeds of insurance within a specified number of days;
- (w) breach by the counterparty thereto of any material obligation under a Project Document to the extent such breach could reasonably be expected to have a Material Adverse Effect;
- (x) failure to maintain an amount equal to the Required Debt Service Reserve in the Debt Service Reserve Account;
- (y) any of the Loan Documents shall cease to be in full force and effect or Holding or the Borrower so asserts; and

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- (z) failure to achieve any Milestone (including the Minimum Additional Equity) by the relevant Milestone Completion Date.

### 30. *Remedies*

Upon the occurrence of an event of default, the Loan Documents will include usual and customary remedies as well as such other rights as may be required under the Program Requirements to allow DOE to dispose of the Collateral or otherwise protect the interests of the United States or the public interest.

### **Additional Provisions of Loan Documents**

#### 31. *Required Insurance*

Fisker will maintain or cause to be maintained in full force and effect at all times the insurance coverages listed and described in the definitive Transaction Documents or otherwise approved by DOE in its reasonable discretion (the “*Required Insurance*”), in each case with financially sound insurers and reinsurers approved by DOE in its reasonable discretion.

Each such casualty policy described above will name the United States of America, including DOE and FFB, as loss payee and each such liability policy described above will name the United States of America as additional insured. Each insurance policy will provide for 30 days’ written notice to DOE prior to termination or expiration of any coverage and such other endorsements as DOE may require. So long as principal amount of the Loans is outstanding, Fisker shall (x) promptly upon renewal of any insurance policy, deliver, or cause to be delivered, to DOE a certificate of insurance with respect to such policy and (y) notify DOE in writing of any change of insurance carrier within 30 days of such change.

#### 32. *Amendments*

No amendment, modification or waiver of any provision of any Loan Document nor consent to any departure by the Borrower or Holding therefrom, shall in any event be effective unless:

(a) Amendments and Waivers. The amendment, modification or waiver shall be in writing and signed by the Borrower, Holding and DOE or FFB, as applicable, and then any such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; and

(b) Federal Credit Reform Act Compliance. DOE performs all accounting and other requirements related to such amendment, modification or waiver arising out of the Federal Credit Reform Act of 1990, as amended (codified at 2 U.S.C. § 661 *et seq.*), including:

(i) analysis of the amendment, modification or waiver to determine whether it increases the costs of the applicable Loan;

(ii) making a determination whether budget authority for the additional cost has been provided in advance in an appropriations Act; and

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(iii) paying any such increased costs from the credit program account into the financing account and recording such increased costs in the fiscal year in which the applicable Loan is disbursed or the costs altered.

### 33. *Indemnification*

The Borrower shall indemnify and hold harmless the United States of America, including DOE and FFB, and each other governmental agency or instrumentality of the United States, their respective designees, agents, and contractors, and all of their respective directors, officers and employees (each, an "*Indemnified Person*") from and against (and will reimburse each Indemnified Person for) any and all losses, claims, damages, liabilities or other expenses (including the reasonable fees, disbursements and other charges of counsel, but not including the expenses incurred by DOE in connection with the preparation, negotiation, execution and delivery of this Conditional Commitment Letter, Term Sheet and any Transaction Documents), as the same are incurred, to which such Indemnified Person may become subject arising out of or relating to (i) the execution or delivery of this Conditional Commitment Letter, Term Sheet, any Transaction Document or any agreement or instrument contemplated hereby or thereby, or the performance by the parties hereto or thereto of their respective obligations hereunder or thereunder or the consummation of the transactions contemplated hereby or thereby, (ii) the enforcement or preservation of any rights under this Conditional Commitment Letter, the Term Sheet, any Transaction Document or any agreement or instrument prepared in connection herewith or therewith, (iii) the Loans or the use or proposed use of the proceeds thereof, (iv) any actual or alleged presence or release of any substance of any kind defined as hazardous or toxic under the environmental laws of the United States, any foreign government or international organization, or of any state, local, municipal or other governmental authority, on or from any property owned, occupied or operated by the Applicant or any of its affiliates, or any environmental liability related in any way to the Applicant or any of its affiliates or any of its properties, or (v) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory, whether brought by any third party or by the Applicant or any of its affiliates or otherwise, and regardless of whether any Indemnified Person is a party thereto, *provided* that such indemnity shall not apply to the extent the loss, claim, damage, liability or other expense results from the gross negligence or willful misconduct of the Indemnified Person, in each case as determined by a court of competent jurisdiction in a final, non-appealable order. This indemnity obligation shall survive the execution of the Loan Documents and the expiration or other termination of the Loans.

### 34. *Governing Law*

All Loan Documents and Security Documents will be governed by the federal laws of the United States of America and not the law of the several states.

### 35. *Interpretation and Rules of Construction*

For purposes of this Conditional Commitment Letter and Term Sheet, the following rules of interpretation and construction shall apply:

- 33 -

(a) Except where expressly provided otherwise, whenever any matter is required to be satisfactory to, or determined or approved by, DOE, or DOE is required or permitted to exercise any discretion (including any discretion to waive, select, require, deem appropriate, deem necessary, permit, determine or approve any matter), the satisfaction, determination or approval of DOE, or the exercise by DOE of such discretion, shall be in its sole and absolute discretion.

(b) The words “including”, “includes” and “include” shall be deemed to be followed in each instance by the words “without limitation”.

(c) The word “or” shall be non-exclusive and shall be construed to include the word “and”.

Schedule 1  
**Financial Covenants**

Financial Covenants will be based on Holding's consolidated financial statements prepared in accordance with US GAAP and consistent with historically applied accounting policies and practices.<sup>5</sup>

(a) For purposes of the Financial Covenants, terms are defined as follows:

(i) "EBITDA" is defined as consolidated net income plus to the extent reducing consolidated net income, the sum, without duplication, of amounts for: (A) consolidated interest expense, (B) provisions for federal, state, local and foreign income taxes (including franchise and similar taxes) and for foreign withholding taxes payable, (C) total depreciation expense, (D) total amortization expense, (E) other non-cash charges reducing consolidated net income including with respect to stock based compensation, warranty, inventory reserves, (F) any net after-tax non-cash loss from the early extinguishment of indebtedness or hedging obligations or derivative instruments, (G) losses from non-ordinary course asset sales, (H) non-operating losses, (I) mark-to-market losses recognized pursuant to Financial Accounting Standards Board Statement No. 133 or any successor thereof, and (J) intangible write downs; and minus, to the extent increasing consolidated net income, the sum, without duplication, of amounts for: (A) federal, state, local and foreign income tax credits, (B) non-cash gains increasing consolidated net income, (C) any net after-tax income from the early extinguishment of Indebtedness or hedging obligations or other derivative instruments, (D) gains from non-ordinary course asset sales, (E) non-operating income, (F) mark-to-market gains recognized pursuant to Financial Accounting Standards Board Statement No. 133 or any successor thereof, and (G) intangible gains.

(ii) "Total Debt" means, as of any date, an amount determined for Fisker on a consolidated basis equal to borrowed money debt and lease obligations.

(iii) "Fixed Charge Coverage Ratio" is defined as the ratio of EBITDA to consolidated interest expense, required loan principal amortization, lease expenses and capital expenditures for such four fiscal quarter period.

(iv) "Net Worth" is defined as total assets minus total liabilities, after the reduction of the value of any intangible assets, at the end of each fiscal year.

(b) The following Financial Covenants will be measured:

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<sup>5</sup> For the avoidance of doubt, the financial statements shall be prepared and the Financial Covenants shall be calculated without giving effect to any election under Statement of Financial Accounting Standards 159 (or any similar accounting principle) permitting a person to value its financial liabilities at the fair value thereof.

- 2 -

(i) Holding's Total Debt to EBITDA ratio, commencing with the fiscal quarter ending December 31, 2012, shall not at any time exceed 3 to 1 and, will be tested quarterly at the end of each fiscal quarter based on trailing four quarter financial results.

(ii) Holding's Fixed Charge Coverage Ratio shall exceed 2 to 1 at the end of each measurement period ending on or after December 31, 2012. Holding's Fixed Charge Coverage Ratio will be tested quarterly based on trailing twelve month financial results.

(iii) Holding's Net Worth at the end of each fiscal year shall equal or exceed the following levels:

| Fiscal Year Ending            | Minimum Tangible Net Worth |
|-------------------------------|----------------------------|
| 12/31/2012                    | \$50 million               |
| 12/31/2013                    | \$150 million              |
| 12/31 of each year thereafter | \$250 million              |

(iv) Holding's minimum EBITDA commencing with the fiscal year ending December 31, 2011 shall not be less than the levels set forth in the schedule below for the applicable fiscal year:

| Fiscal Year Ending            | Minimum EBITDA |
|-------------------------------|----------------|
| 12/31/2011                    | \$25 million   |
| 12/31/2012                    | \$100 million  |
| 12/31 of each year thereafter | \$200 million  |

Schedule 2  
**Minimum Additional Equity Milestones**

| <u>Amounts<sup>6</sup></u> | <u>Milestone Completion Dates</u>                |
|----------------------------|--|
| \$35 million               | Delivery of Conditional Commitment Letter by DOE |
| \$122.8 million            | Financial Closing Date                           |
| \$27.2 million             | February 15, 2010                                |
| \$50 million               | October 31, 2010                                 |

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<sup>6</sup> May include equity bridge loans made after May 1, 2009 which have been converted to equity prior to the Financial Closing Date. To qualify as Minimum Additional Equity the terms of the transaction must be satisfactory to DOE and the proceeds must have been received by Borrower in the form of unrestricted cash.



# **EXHIBIT 13**

United States Government Accountability Office

GAO

Report to Congressional Committees

March 2012

# DOE LOAN GUARANTEES

## Further Actions Are Needed to Improve Tracking and Review of Applications



G A O

Accountability \* Integrity \* Reliability



Highlights of GAO-12-157, a report to congressional committees

March 2012

## DOE LOAN GUARANTEES

### Further Actions Are Needed to Improve Tracking and Review of Applications

#### Why GAO Did This Study

The Department of Energy's (DOE) Loan Guarantee Program (LGP) was created by section 1703 of the Energy Policy Act of 2005 to guarantee loans for innovative energy projects. Currently, DOE is authorized to make up to \$34 billion in section 1703 loan guarantees. In February 2009, the American Recovery and Reinvestment Act added section 1705, making certain commercial technologies that could start construction by September 30, 2011, eligible for loan guarantees. It provided \$6 billion in appropriations that were later reduced by transfer and rescission to \$2.5 billion. The funds could cover DOE's costs for an estimated \$18 billion in additional loan guarantees. GAO has an ongoing mandate to review the program's implementation. Because of concerns raised in prior work, GAO assessed (1) the status of the applications to the LGP and (2) for loans that the LGP has committed to, or made, the extent to which the program has adhered to its process for reviewing applications. GAO analyzed relevant legislation, regulations, and guidance; prior audits; and LGP data, documents, and applications. GAO also interviewed DOE officials and private lenders with experience in energy project lending.

#### What GAO Recommends

GAO recommends that the Secretary of Energy establish a timetable for, and fully implement, a consolidated system to provide information on LGP applications and reviews and regularly update program policies and procedures. DOE disagreed with the first of GAO's three recommendations; GAO continues to believe that a consolidated system would enhance program management.

View GAO-12-157. For more information, contact Frank Rusco at (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov).

#### What GAO Found

The Department of Energy (DOE) has made \$15 billion in loan guarantees and conditionally committed to an additional \$15 billion, but the program does not have the consolidated data on application status needed to facilitate efficient management and program oversight. For the 460 applications to the Loan Guarantee Program (LGP), DOE has made loan guarantees for 7 percent and committed to an additional 2 percent. The time the LGP took to review loan applications decreased over the course of the program, according to GAO's analysis of LGP data. However, when GAO requested data from the LGP on the status of these applications, the LGP did not have consolidated data readily available and had to assemble these data over several months from various sources. Without consolidated data on applicants, LGP managers do not have readily accessible information that would facilitate more efficient program management, and LGP staff may not be able to identify weaknesses, if any, in the program's application review process and approval procedures. Furthermore, because it took months to assemble the data required for GAO's review, it is also clear that the data were not readily available to conduct timely oversight of the program. LGP officials have acknowledged the need for a consolidated system and said that the program has begun developing a comprehensive business management system that could also be used to track the status of LGP applications. However, the LGP has not committed to a timetable to fully implement this system.

The LGP adhered to most of its established process for reviewing applications, but its actual process differed from its established process at least once on 11 of the 13 applications GAO reviewed. Private lenders who finance energy projects that GAO interviewed found that the LGP's established review process was generally as stringent as or more stringent than their own. However, GAO found that the reviews that the LGP conducted sometimes differed from its established process in that, for example, actual reviews skipped applicable review steps. In other cases, GAO could not determine whether the LGP had performed some established review steps because of poor documentation. Omitting or poorly documenting reviews reduces the LGP's assurance that it has treated applicants consistently and equitably and, in some cases, may affect the LGP's ability to fully assess and mitigate project risks. Furthermore, the absence of adequate documentation may make it difficult for DOE to defend its decisions on loan guarantees as sound and fair if it is questioned about the justification for and equity of those decisions. One cause of the differences between established and actual processes was that, according to LGP staff, they were following procedures that had been revised but were not yet updated in the credit policies and procedures manual, which governs much of the LGP's established review process. In particular, the version of the manual in use at the time of GAO's review was dated March 5, 2009, even though the manual states it was meant to be updated at least annually, and more frequently as needed. The updated manual dated October 6, 2011, addresses many of the differences GAO identified. Officials also demonstrated that LGP had taken steps to address the documentation issues by beginning to implement its new document management system. However, by the close of GAO's review, LGP could not provide sufficient documentation to resolve the issues identified in the review.

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#### Abbreviations

|      |   |
|------|---|
| CRB  | Credit Review Board                       |
| DOE  | Department of Energy                      |
| EERE | Energy Efficiency, Renewable Energy       |
| FIPP | Financial Institution Partnership Program |
| LGP  | Loan Guarantee Program                    |
| LPO  | Loan Programs Office                      |
| OMB  | Office of Management and Budget           |

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United States Government Accountability Office  
Washington, DC 20548

March 12, 2012

The Honorable Dianne Feinstein  
Chair  
The Honorable Lamar Alexander  
Ranking Member  
Subcommittee on Energy and Water Development  
Committee on Appropriations  
United States Senate

The Honorable Rodney P. Frelinghuysen  
Chairman  
The Honorable Peter J. Visclosky  
Ranking Member  
Subcommittee on Energy and Water Development,  
and Related Agencies  
Committee on Appropriations  
House of Representatives

The Department of Energy's (DOE) loan guarantee program (LGP) is currently authorized to issue loan guarantees worth up to \$34 billion for certain types of energy projects that need affordable financing.<sup>1</sup> Federal loan guarantee programs such as the LGP can help companies obtain such financing because the federal government agrees to reimburse the lender for the guaranteed amount if a borrower defaults. As directed by section 1703 of the Energy Policy Act of 2005, the LGP originally focused on projects that use new or significantly improved energy technologies and avoid, reduce, or sequester emissions of air pollutants or man-made greenhouse gases. In February 2009, Congress expanded the scope of the LGP in the American Recovery and Reinvestment Act (Recovery Act), by adding section 1705 to the Energy Policy Act, which provided funding and extended the program to include projects that use commercial energy technology that employs renewable energy systems, electric power transmission systems, or leading-edge biofuels that meet certain criteria. The LGP has issued nine calls for applications—known as solicitations—each of which covers particular types of energy technology.

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<sup>1</sup>The amount of authority does not include approximately \$20 billion that expired when authority for a portion of the program expired on September 30, 2011.

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According to DOE officials, the LGP is important to both develop new energy technologies for commercial use and make some commercial projects possible, thereby creating jobs and new energy supplies. However, loan guarantee programs can also expose the government to substantial financial risks. For example, a borrower could default on a federally guaranteed loan, leaving taxpayers to pay for the loss. In the past, we also found problems with federal loan guarantee programs that occurred in part because agencies did not exercise sufficient due diligence. Due diligence is the review process by which a lender identifies and mitigates potential problems or risks with a project before the lender makes a loan or loan guarantee. Recently, the filing of bankruptcy petitions by two recipients of DOE loan guarantees have raised concerns that DOE may not be sufficiently identifying and mitigating the risk of a loan default.

GAO has an ongoing mandate under the 2007 Revised Continuing Appropriations Resolution to review DOE's execution of the LGP and to report its findings to the House and Senate Committees on Appropriations. This is the sixth time we have reported on this program.<sup>2</sup> We have raised concerns in our prior work about the limitations of the portion of the program conducted under section 1703 in attracting financially viable projects representing the full range of targeted technologies.<sup>3</sup> In addition, we previously reported, among other things, that the LGP treated applicants inconsistently and recommended that DOE treat applicants consistently or clearly establish the conditions that would warrant disparate treatment.<sup>4</sup> Because of questions regarding inconsistent treatment of applicants and DOE's review process that we raised in the 2010 report, our objectives for this report were to determine (1) the status of the applications to the LGP's nine solicitations and (2) the extent to which the LGP has adhered to its process for reviewing applications for loans that the LGP has committed to or closed.

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<sup>2</sup>See our list of related products on the LGP at the end of this report.

<sup>3</sup>GAO, *Department of Energy: New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Program Management*, GAO-08-750 (Washington, D.C.: July 7, 2008).

<sup>4</sup>GAO-08-750; GAO, *Department of Energy: Further Actions Are Needed to Improve DOE's Ability to Evaluate and Implement the Loan Guarantee Program*, GAO-10-627 (Washington, D.C.: July 12, 2010).



To determine the status of applications to the LGP's nine solicitations, we reviewed DOE and LGP documents on the establishment and operation of the program and analyzed the LGP's available data on the applications received and their current status. Because the LGP did not maintain consolidated information on application status, it had to assemble data from various sources for all of the applications as of September 30, 2011. To assist in this effort, we tailored a data request to collect data on the status of all 460 applications to the program in consultation with agency officials. These data were to provide a current snapshot of the program by solicitation and allow analysis of various characteristics. LGP staff familiar with each solicitation completed the spreadsheets, and these spreadsheets were reviewed by managers before they were forwarded to GAO. We assessed the reliability of the data the LGP provided by reviewing it, comparing it to other sources and following up with the agency to clarify questions and inconsistencies, and obtain missing data. Once the data were all collected, we found them to be sufficiently reliable for our purposes. This process enabled us to develop up-to-date programwide information on the status of applications. The LGP staff updated its March 2011 applicant status data as of July 29, 2011, and we obtained additional data on the conditional commitments and closings made by the September 30, 2011, expiration of the section 1705 authority for loan guarantees with a credit subsidy. In cases where multiple applications were submitted for a single project, we considered each to be a single application for purposes of this report. In addition, we met with the LGP's management and staff from each of the divisions involved with the review process. To determine the extent to which the LGP has adhered to its process for reviewing applications for loans that it has committed to or closed, we identified the key steps in the review process by analyzing the laws, regulations, policies, guidance, and solicitations for the program. We verified these key steps in interviews with LGP officials. We identified the 13 applications that had received conditional commitments or had closed by December 31, 2010.<sup>5</sup> We then requested documentation from the LGP of the key review steps it conducted for selected applications. We initially requested this documentation for a

<sup>5</sup>Three additional applications had either reached conditional commitment or closed during this period. We excluded these applications from our review because the LGP's review process for these applications was substantially different. A conditional commitment is a commitment by DOE to issue a loan guarantee if the applicant satisfies specific requirements. The Secretary of Energy has the discretion to cancel a conditional commitment at any time for any reason prior to the issuance of a loan guarantee.

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nonprobability sample of 6 applications representing a range of solicitations and project types.<sup>6</sup> We also collected more limited information on the 7 remaining applications to which DOE had conditionally committed to issue a loan guarantee by the end of calendar year 2010. For these 7, we reviewed certain key steps for which we found differences from the LGP's established process during our review of the initial 6 applications. We did not evaluate the quality of the LGP's analyses supporting the completion of these steps. The applications we reviewed were processed by the LGP under the policies and procedures that were in place through September 30, 2011.<sup>7</sup> We also interviewed seven private lenders with experience financing energy sector projects to gain insights on the comparability of the LGP and private sector review processes. A more detailed discussion of our objectives, scope, and methodology is presented in appendix I.

We conducted this performance audit from September 2010 to February 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

DOE's LGP was designed to address the fundamental impediment for investors that stems from the high risks of clean energy projects, including technology risk—the risk that the new technology will not perform as expected—and execution risk—the risk that the borrower will not perform as expected. Companies can face obstacles in securing enough affordable financing to survive the “valley of death” between developing innovative technologies and commercializing them. Because the risks that lenders must assume to support new technologies can put private financing out of reach, companies may not be able to commercialize innovative technologies without the federal government's

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<sup>6</sup>Because this was a nonprobability sample, we cannot generalize what we found to all applications, but we chose these applications to include a variety of project types and for different solicitations.

<sup>7</sup>Department of Energy, *Title XVII Of The Energy Policy Act Of 2005 Loan Guarantee Program, Credit Policies and Procedures* (Washington, D.C., Mar. 5, 2009).

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financial support. According to the DOE loan program's Executive Director, DOE loan guarantees lower the cost of capital for projects using innovative energy technologies, making them more competitive with conventional technologies and thus more attractive to lenders and equity investors. Moreover, according to the DOE loan programs Executive Director, the program takes advantage of DOE's expertise in analyzing the technical aspects of proposed projects, which can be difficult for private sector lenders without that expertise.

Until February 2009, the LGP was working exclusively under section 1703 of the Energy Policy Act of 2005, which authorized loan guarantees for new or innovative energy technologies that had not yet been commercialized. Congress had authorized DOE to guarantee approximately \$34 billion in section 1703 loans by fiscal year 2009, after accounting for rescissions, but it did not appropriate funds to pay the "credit subsidy costs" of these guarantees. For section 1703 loan guarantees, each applicant was to pay the credit subsidy cost of its own project. These costs are defined as the estimated long-term cost, in net present value terms, over the entire period the loans are outstanding to cover interest subsidies, defaults, and delinquencies (not including administrative costs). Under the Federal Credit Reform Act of 1990, the credit subsidy cost for any guaranteed loan must be provided prior to a loan guarantee commitment.

In past reports, we found several issues with the LGP's implementation of section 1703. For example, in our July 2008 report, we stated that risks inherent to the program make it difficult for DOE to estimate credit subsidy costs it charges to borrowers.<sup>8</sup> If DOE underestimates these costs, taxpayers will ultimately bear the costs of defaults or other shortfalls not covered by the borrowers' payments into a cost-subsidy pool that is to cover section 1703's program-wide costs of default. In addition, we reported that, to the extent that certain types of projects or technologies are more likely than others to have fees that are too high to remain economically viable, the projects that do accept guarantees may be more heavily weighted toward lower-risk technologies and may not represent the full range of technologies targeted by the section 1703 program.

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<sup>8</sup>GAO-08-750.

In February 2009, the Recovery Act amended the Energy Policy Act of 2005, authorizing the LGP to guarantee loans under section 1705. This section also provided \$2.5 billion to pay applicants' credit subsidy costs.<sup>9</sup> This credit subsidy funding was available only to projects that began construction by September 30, 2011, among other requirements.<sup>10</sup> DOE estimated that the funding would be sufficient to provide about \$18 billion in guarantees under section 1705. Section 1705 authorized guarantees for commercial energy projects that employ renewable energy systems, electric power transmission systems, or leading-edge biofuels that meet certain criteria. Some of these are the same types of projects eligible under section 1703, which authorizes guarantees only for projects that use new or significantly improved technologies.<sup>11</sup> Consequently, many projects that had applied under section 1703 became eligible to have their credit subsidy costs paid under section 1705.

<sup>9</sup>Pub. L. No. 111-5, Div. A, Title IV (Feb. 17, 2009). Congress originally appropriated nearly \$6 billion to pay the credit subsidy costs of projects supported under section 1705, with the limitation that funding to pay the credit subsidy costs of leading-edge biofuel projects eligible under this section would not exceed \$500 million. Congress later authorized the President to transfer up to \$2 billion of the nearly \$6 billion to expand the "Cash for Clunkers" program. Pub. L. No. 111-47 (Aug. 7, 2009). The \$2 billion was transferred to the Department of Transportation, leaving nearly \$4 billion to cover credit subsidy costs of projects supported under section 1705. On August 10, 2010, Pub. L. No. 111-226 rescinded an additional \$1.5 billion from the loan guarantee appropriation to pay for education-related jobs, Medicaid and other initiatives, further reducing funding available to \$2.5 billion.

<sup>10</sup>Other requirements include that the workers employed on the project, including contractors or subcontractors, will be paid wages not less than prevailing on similar work in the locality in accordance with the Davis-Bacon Act. The act limited loan guarantees under section 1705 to the following categories of projects: (1) renewable energy systems, including incremental hydropower, that generate electricity or thermal energy, and facilities that manufacture related components; (2) electric power transmission systems, including upgrading and reconductoring projects; and (3) leading-edge biofuel projects that will use technologies performing at the pilot or demonstration scale that the Secretary determines are likely to become commercial technologies and will produce transportation fuels that substantially reduce life-cycle greenhouse gas emissions compared with other transportation fuels.

<sup>11</sup>New or significantly improved technology means a technology concerned with the production, consumption, or transportation of energy and that is not a commercial technology, and that has either: (1) only recently been developed, discovered, or learned; or (2) involves or constitutes one or more meaningful and important improvements in productivity or value, in comparison to commercial technologies in use in the United States at the time the term sheet is issued.

Because authority for the section 1705 loan guarantees expired on September 30, 2011, section 1703 is now the only remaining authority for the LGP. In April 2011, Congress appropriated \$170 million to pay credit subsidy costs for section 1703 projects. Previously, these costs were to be paid exclusively by the applicants and were not federally funded. Congress also authorized DOE to extend eligibility under section 1703 to certain projects that had applied under section 1705 but did not receive a loan guarantee prior to the September 30, 2011, deadline.<sup>12</sup>

DOE has issued nine calls for applications to the LGP. Each of these nine “solicitations” has specified the energy technologies it targets and provided criteria for the LGP to determine project eligibility and the likelihood of applicants repaying their loans (see table 1).

**Table 1: DOE Solicitations for Applications to the LGP**

| <b>Name of solicitation</b>                       | <b>Date issued or updated</b> | <b>Description of eligible energy technology</b>   |
|---|-------------------------------|--|
| Mixed 06  | 8/8/06                        | All technologies except for nuclear facilities and oil refineries.   |
| Nuclear Front-End                                 | 6/30/08                       | Facilities for new uranium enrichment capacity and distribution.   |
| Nuclear Power                                     | 6/30/08                       | Nuclear power facilities.  |
| Energy efficiency and renewable energy or EERE 08 | 6/30/08                       | Innovative energy efficiency, renewable energy, and advanced energy transmission and distribution technologies.  |
| Fossil  | 9/22/08                       | Coal-based power generation and industrial gasification facilities that incorporate carbon capture and sequestration or other beneficial uses of carbon and for advanced coal gasification facilities. |
| Energy efficiency and renewable energy or EERE 09 | 7/29/09                       | Innovating energy efficiency, renewable energy, and advanced energy transmission and distribution technologies.  |
| Transmission                                      | 7/29/09                       | Electric power transmission infrastructure investment projects.  |

<sup>12</sup>Department of Defense and Full-Year Continuing Appropriations Act, 2011, Pub. L. No. 112-10.

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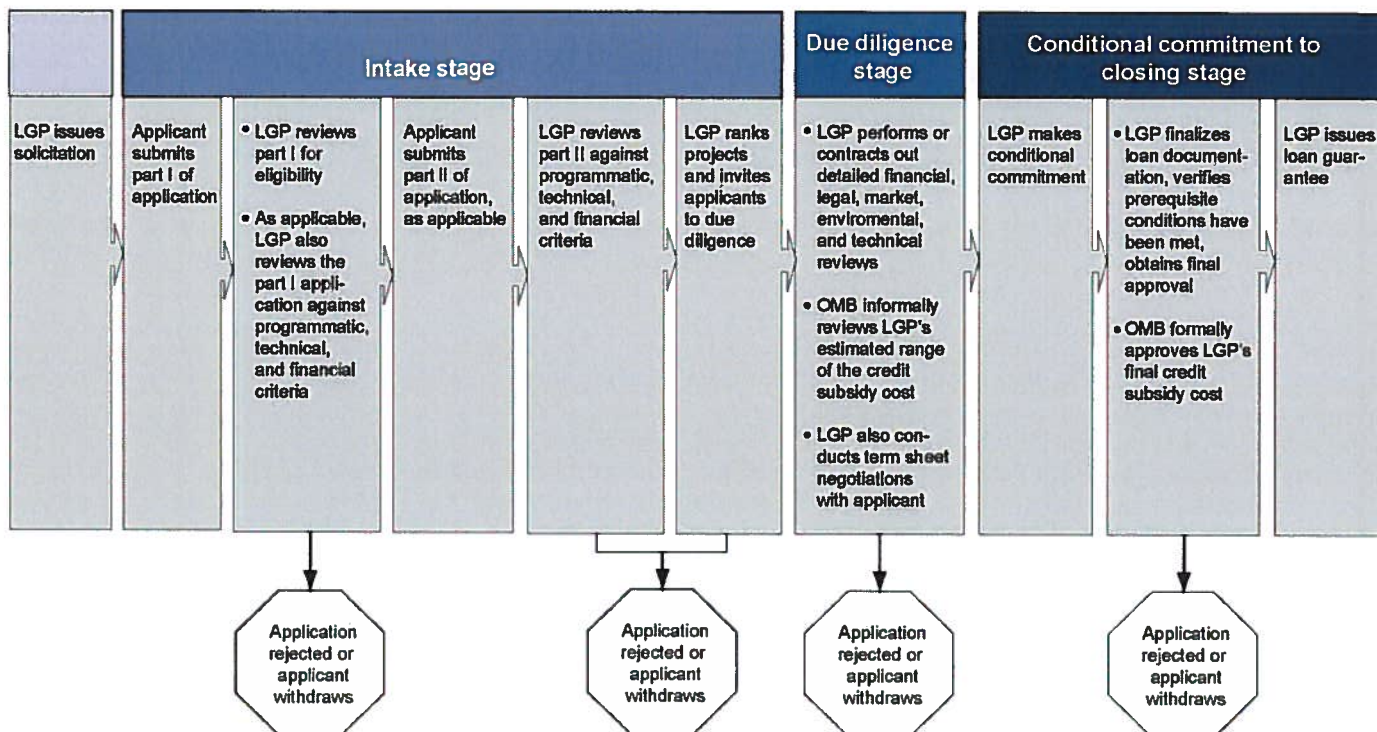
| <b>Name of solicitation</b>                      | <b>Date issued or updated</b> | <b>Description of eligible energy technology</b>                                    |
|--|-------------------------------|---|
| Financial Institution Partnership Program (FIPP) | 10/7/09                       | Renewable energy generation projects using commercial technology.                   |
| Manufacturing                                    | 8/10/10                       | Manufacture of renewable energy systems and components using commercial technology. |

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Source: DOE.

To help ensure that that these criteria were applied consistently and that each selected project provided a reasonable prospect of repayment, in March 2009, the LGP issued a credit policies and procedures manual for the program, outlining its policies and procedures for reviewing loan guarantee applications. As shown in figure 1, this review process is divided into three stages: intake, due diligence, and "conditional commitment to closing." We use the term "review process" to refer to the entire process.

**Figure 1: Overview of LGP Review Process for Applications through the Intake, Due Diligence, and Conditional Commitment to Closing Stages**



Source: GAO presentation of DOE data.

During the intake stage, the LGP assesses applications in a two-part process for most applicants. In part I, the LGP considers a project's eligibility based on the requirements in the solicitation and relevant laws and regulations. Nuclear solicitation applications are also evaluated against programmatic, technical, and financial criteria during the part I review. Based on the LGP's eligibility determination during part I review, qualifying applicants are invited to submit a part II application. Generally, LGP evaluates this application against programmatic, technical, and financial criteria to form a basis for ranking applications within each solicitation.<sup>13</sup> Based on these initial rankings, the LGP selects certain

<sup>13</sup>Under the FIPP solicitation, applicants must apply to a private "lead lender," which initially evaluates the proposed loan guarantee for credit approval and decides whether to apply to DOE for the loan guarantee.

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applications for the due diligence stage. During due diligence, the LGP performs a detailed examination of the project's financial, technical, legal, and other qualifications to ensure that the LGP has identified and mitigated any risks that might affect the applicant's ability to repay the loan guarantee. Key to identifying risks during due diligence are required reports by independent consultants on the technical and legal aspects of the project and others, such as marketing reports, that the LGP uses when needed. The LGP also negotiates the terms of the loan guarantee with the applicant during due diligence.

The proposed loan guarantee transaction is then submitted for review and/or approval by the following entities:

- DOE's Credit Committee, consisting of senior executive service DOE officials, most of whom are not part of the LGP.
- DOE's Credit Review Board (CRB), which consists of senior-level officials such as the deputy and undersecretaries of Energy.
- The Office of Management and Budget (OMB), which reviews the LGP's estimated credit subsidy range for each transaction.
- Department of the Treasury.
- The Secretary of Energy, who has final approval authority.

Following the Secretary's approval, the LGP offers the applicant a "conditional commitment" for a loan guarantee. If the applicant signs and returns the conditional commitment offer with the required fee, the offer becomes a conditional commitment, contingent on the applicant meeting conditions prior to closing. During the conditional commitment to closing stage, LGP officials and outside counsel prepare the final financing documents and ensure that the applicant has met all conditions required for closing, and the LGP obtains formal approval of the final credit subsidy cost from OMB. Prior to closing, applications may be rejected by the LGP. Similarly, applicants can withdraw at any point during the review process. Once these steps have been completed, the LGP "closes" the loan guarantee and, subject to the terms and conditions of the loan guarantee agreement, begins to disburse funds to the project. For further detail on the review process, see appendix III.



## DOE Has Made \$15.1 Billion in Loan Guarantees but Does Not Maintain Consolidated Data on Status of Applications

For 460 applications to the LGP from its nine solicitations, DOE has made \$15.1 billion in loan guarantees and conditionally committed to an additional \$15 billion, representing \$30 billion of the \$34 billion in loan guarantees authorized for the LGP.<sup>14</sup> However, when we requested data from the LGP on the status of the applications to its nine solicitations, the LGP did not have consolidated data readily available but had to assemble them from various sources.

## DOE Has Made \$15.1 Billion in Loan Guarantees and Committed to Another \$15 Billion

As of September 30, 2011, the LGP had received 460 applications and made (closed) \$15.1 billion in loan guarantees in response to 30 applications (7 percent of all applications), all under section 1705. It had not closed any guarantees under section 1703. In addition, the LGP had conditionally committed another \$15 billion for 10 more applications (2 percent of all applications)—4 under section 1705 and 6 under section 1703. The closed loan guarantees obligated \$1.9 billion of the \$2.5 billion in credit subsidy appropriations funded by the Recovery Act for section 1705, leaving \$600 million of the funds unused before the program expired. For section 1703 credit subsidy costs, the \$170 million that Congress appropriated in April 2011 to pay such costs is available, but it may not cover all such costs because the legislation makes the funds available only for renewable energy or efficient end-use energy technologies.<sup>15</sup> Applicants whose projects' credit subsidy costs are not covered by the appropriation must pay their own credit subsidy costs. To date, credit subsidy costs for loan guarantees that DOE has closed have, on average, been about 12.5 percent of the guaranteed loan amounts.

The median loan guarantee requested for all applications was \$141 million. Applications for nuclear power projects requested significantly larger loan amounts—a median of \$7 billion—and requested the largest

<sup>14</sup>The amount of authority does not include approximately \$20 billion that expired when authority for a portion of the program expired on September 30, 2011.

<sup>15</sup>The legislation also made some section 1705 projects submitted to DOE by Feb. 24, 2011, eligible for these funds, but nuclear projects are not included among eligible projects.

total dollar amount by type of technology—\$117 billion.<sup>16</sup> Applications for energy efficiency and renewable energy solicitations requested the second-largest dollar amount—\$74 billion. Table 2 provides further details on the applications by solicitation and the resulting closed loan guarantees and conditional commitments. Appendix II provides further details on the individual committed and closed loan guarantees.

**Table 2: Number of Applications, Median and Total Loan Guarantees Requested, Total Conditionally Committed Loan Guarantees, and Total Closed Loan Guarantees, by Solicitation, through September 30, 2011**

| Dollars in millions   |                        |                                 |                                |  |  |
|---|------------------------|---------------------------------|--------------------------------|--|--|
| Solicitation, issue date  | Number of applications | Median loan guarantee requested | Total loan guarantee requested | Total conditionally committed loan guarantee | Total closed loan guarantee <sup>a</sup> |
| Mixed 06, 8/8/06  | 140                    | \$60 <sup>b</sup>               | \$31,018 <sup>b</sup>          | \$72 <sup>e</sup>                            | \$1,203                                  |
| Energy Efficiency and Renewable Energy 08, 6/30/08 <sup>c</sup> | 68                     | 163                             | 21,265                         | 261 <sup>e</sup>                             | 3,381                                    |
| Nuclear Front-End, 6/30/08                                      | 2                      | 2,000                           | 4,000                          | 2,000 <sup>e</sup>                           | 0  |
| Nuclear Power, 6/30/08  | 19                     | 6,969                           | 117,363                        | 8,326 <sup>e</sup>                           | 0  |
| Fossil, 9/22/08   | 8                      | 2,072                           | 17,145                         | 0  | 0  |
| Energy Efficiency and Renewable Energy 09, 7/29/09              | 168                    | 150                             | 52,915                         | 2,105  | 5,601                                    |
| Transmission, 7/29/09   | 12                     | 660                             | 11,586                         | 0  | 343                                      |
| Financial Institution Partnership Program, 10/7/09              | 37                     | 146                             | 11,057                         | 2,274  | 4,516                                    |
| Manufacturing, 8/10/10  | 6                      | 98                              | 1,022                          | 0  | 0  |
| <b>Total</b>  | <b>460</b>             | <b>\$141<sup>d</sup></b>        | <b>\$267,372</b>               | <b>\$15,038<sup>e</sup></b>                  | <b>\$15,044</b>                          |

Source: GAO analysis of DOE data provided as of July 29, 2011, and updated for new commitments or closings, as of September 30, 2011.

Note: Totals may not add due to rounding.

<sup>a</sup>Fifteen of these guarantees went to projects that applied under section 1703 but were later deemed eligible for and received funding under section 1705.

<sup>16</sup>The minimum loan guarantee requested for all applications was \$0, and the maximum loan guarantee requested was \$12 billion, both for nuclear power projects. The \$0 loan guarantee request was for one portion of a jointly sponsored nuclear power project. The joint sponsor of the nuclear power project requested approximately \$8 billion in loan guarantees.

<sup>b</sup>The median and total loan guarantee amounts reflect the reported loan amounts for 134 of the 140 Mixed 06 applications because DOE said 6 applicants did not specify the amount of their loan guarantee request.

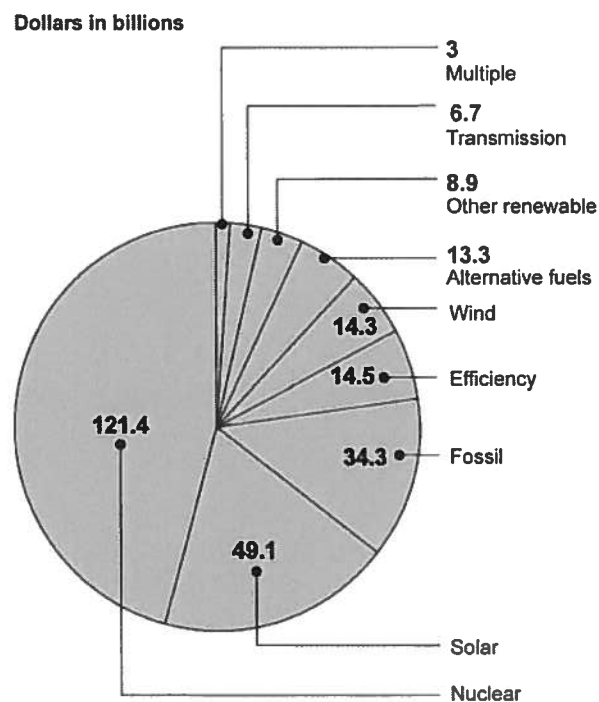
<sup>c</sup>This row includes four applications that LGP does not consider to be official submissions since the applicants did not pay the application fee. However, we included these applications in our analysis because the LGP included them in the application data they provided to us, and these applications demonstrate the level of interest in the solicitation.

<sup>d</sup>This amount is the median loan guarantee amount requested across all solicitations. The minimum loan guarantee requested for all applications was \$0, and the maximum loan guarantee requested was \$12 billion, both for nuclear power projects.

<sup>e</sup>Of the \$15 billion in committed loan guarantees, applications under the section 1703 authority to these solicitations account for \$10.4 billion or 71 percent. See appendix II for a list of these committed loan guarantees.

For all 460 LGP applications submitted, figure 2 shows the total loan guarantee amounts requested by type of energy technology.

**Figure 2: Amount of Loan Guarantees Requested in 460 Applications by Energy Technology Category, as of July 29, 2011**



Source: GAO analysis of DOE data describing the energy technology of each loan guarantee application, as of July 29, 2011.

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Note: For this analysis, we used simplified energy technology categories based on DOE's data. The figure omits one application for which the LGP did not report the type of energy technology employed by the proposed project or the amount requested for the project. It also omits requests that DOE listed as using "other" energy technology, which totaled about 0.01 percent of the amount requested.

Table 3 provides an overview, as of September 30, 2011, of the status of the 460 loan guarantee applications that the LGP received in response to its nine solicitations. Of the 460 applications, 66 were still in various stages of the approval process (intake and due diligence), 40 had received conditional commitment or were closed, and 354 had been withdrawn or rejected. DOE documents list a wide range of reasons for application withdrawals, including inability to submit application material in a timely manner, inability to secure feedstock, project faced many hurdles, applicant did not pursue project, and applicant switched to another program. Solicitations that primarily targeted efficiency and renewable energy received the most applications, while those targeting nuclear front-end technologies (for the beginning of the nuclear fuel cycle), manufacturing, and fossil fuels received the fewest. The rejection rate was highest for applications submitted for two of the earlier solicitations and much lower for DOE's FIPP,<sup>17</sup> a more recent solicitation involving applications sponsored by private financial institutions. Since we began our review, two of the borrowers with closed loan guarantees have declared bankruptcy—Solyndra, Inc., with a \$535 million loan guarantee for manufacturing cylindrical solar cells, and Beacon Power Corporation, with a \$43 million loan guarantee for an energy storage technology.

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<sup>17</sup>FIPP refers to the federal loan guarantees for commercial technology renewable energy generation projects under the DOE LGP solicitation number DE-FOA-0000166, dated October 7, 2009. This solicitation is unique because it is the only one inviting private lenders to share due diligence activities for identifying and mitigating risk and finance a portion of total project costs.

**Table 3: Number (and Percentage) of Applications in Each Review Stage, by Solicitation, as of September 30, 2011**

| Solicitation, issue date                                  | Number (percentage) of applications by stage |              |               |                          |                          |                 |                |
|---|--|--------------|---------------|--------------------------|--------------------------|-----------------|----------------|
|   | Number of applications                       | Intake       | Due diligence | Conditional commitment   | Guarantees made (closed) | Withdrawn       | Rejected       |
| Mixed 06, 8/8/06  | 140  | 0(0)         | 3(2)          | 1(1)                     | 4(3)                     | 8(6)            | 124(89)        |
| EERE 08, 6/30/08 <sup>a</sup>                             | 68   | 0(0)         | 7(10)         | 2(3)                     | 8(12)                    | 6(9)            | 45(66)         |
| Nuclear Front End, 6/30/08                                | 2  | 0(0)         | 1(50)         | 1(50)                    | 0(0)                     | 0(0)            | 0(0)           |
| Nuclear Power, 6/30/08                                    | 19   | 5(26)        | 4(21)         | 3(16)                    | 0(0)                     | 7(37)           | 0(0)           |
| Fossil, 9/22/08   | 8  | 0(0)         | 4(50)         | 0(0)                     | 0(0)                     | 3(38)           | 1(13)          |
| EERE 09, 7/29/09  | 168  | 12(7)        | 21(13)        | 1(1)                     | 10(6)                    | 59(35)          | 65(39)         |
| Transmission, 7/29/09                                     | 12   | 2(17)        | 0(0)          | 0(0)                     | 1(8)                     | 9(75)           | 0(0)           |
| Financial Institution Partnership Program (FIPP), 10/7/09 | 37   | 0(0)         | 7(19)         | 2(5)                     | 7(19)                    | 18(49)          | 3(8)           |
| Manufacturing, 8/10/10                                    | 6  | 0(0)         | 0(0)          | 0(0)                     | 0(0)                     | 3(50)           | 3(50)          |
| <b>Total<sup>b</sup></b>                                  | <b>460</b>                                   | <b>19(4)</b> | <b>47(10)</b> | <b>10(2)<sup>c</sup></b> | <b>30(7)<sup>d</sup></b> | <b>113( 25)</b> | <b>241(52)</b> |

Source: GAO analysis of DOE data provided as of July 29, 2011 and updated for new commitments or closings as of September 30, 2011.

<sup>a</sup>This row includes four applications that the LGP does not consider to be official submissions since the applicants did not pay the application fee. However, we included these applications in our analysis because the LGP included them in the application data they provided to us, and these applications demonstrate the level of interest in the solicitation.

<sup>b</sup>Percentage totals may not add to 100 due to rounding.

<sup>c</sup>Four of these conditional commitments are under section 1705, and six are under section 1703. Many of the section 1703 applications have been in process since 2008 or before. See appendix II, tables 7 and 8.

<sup>d</sup>All of these closed loan guarantees are under section 1705. See appendix II, table 9.

The elapsed time for LGP to process loan applications generally decreased over the course of the program, according to LGP data. LGP officials noted that the elapsed time between review stages includes the time the LGP waited for the applicants to prepare required documents for each stage. The process was longest for applications to the earlier solicitations, issued solely under section 1703, from start to closing.<sup>18</sup> The review process was shorter for applications under the four more recent solicitations, issued after the passage of section 1705. For example, the

<sup>18</sup>Some closed loan guarantees went to projects that applied under section 1703 but were later eligible for and received funding under section 1705.

first solicitation, known as Mixed 06, had the longest overall time frames from intake to closing—a median of 1,442 days—and the FIPP solicitation had the shortest time frames—a median of 422 days.<sup>19</sup> Applications to the FIPP solicitation had the shortest elapsed time because this program was carried out in conjunction with private lenders, who conducted their own reviews before submitting loan applications to the LGP.<sup>20</sup> Table 4 shows the median number of days elapsed during each review stage, by solicitation, as of September 30, 2011.

**Table 4: Number of Applications and Median Number of Days Elapsed During Each Review Stage and Overall, by Solicitation**

| Solicitation, issue date                          | Number of applications | Intake stage (parts I & II) | Due diligence stage    | Conditional commitment to closing stage | Overall: start of intake to closing date | Rejected applications: start of intake to rejection date |
|---|------------------------|-----------------------------|------------------------|---|--|--|
| Number of applications completing this stage      |                        | 114                         | 43                     | 30                                      | 30                                       | 241  |
| Mixed 06, 8/8/06                                  | 140                    | 722                         | 430                    | 284                                     | 1,442                                    | 280  |
| EERE 08, 6/30/08 <sup>a</sup>                     | 68                     | 90                          | 338                    | 177                                     | 696                                      | 168  |
| Nuclear Front-End, 6/30/08                        | 2                      | 230                         | 401                    | b                                       | b  | b  |
| Nuclear Power, 6/30/08                            | 19                     | 219                         | 294                    | b                                       | b  | b  |
| Fossil, 9/22/08                                   | 8                      | 199                         | b                      | b                                       | b  | 201  |
| EERE 09, 7/29/09                                  | 168                    | 194                         | 309                    | 114                                     | 668                                      | 70   |
| Transmission, 7/29/09                             | 12                     | 178                         | 222                    | 115                                     | 515                                      | b  |
| FIPP, 10/7/09                                     | 37                     | 73                          | 228                    | 92                                      | 422                                      | 94   |
| Manufacturing, 8/10/10                            | 6                      | b                           | b                      | b                                       | b  | 78   |
| <b>Median number of days for all applications</b> |                        | <b>184<sup>c</sup></b>      | <b>294<sup>d</sup></b> | <b>127<sup>e</sup></b>                  | <b>660<sup>f</sup></b>                   | <b>277<sup>g</sup></b>                                   |

Source: GAO analysis of DOE data.

**Notes:**

The number of days elapsed represents the median for the review period of those applications that proceeded to the next review stage. We believe the median is a better representation of the data for this table because it reduces the effect of some outliers that skew the data.

<sup>19</sup>The minimum number of days elapsed from intake to closing was 287 days, and the maximum number of days from intake to closing was 1,731 days.

<sup>20</sup>The LGP's lenders to date have been the U.S. Treasury's Federal Financing Bank and the private lenders under the FIPP solicitation who brought applicants to the LGP and who must risk at least 20 percent of the total loans for the applicants' project.

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The calculations were for the status and elapsed days of the 460 applications as of September 30, 2011.

The elapsed time between review stages includes the time the LGP waited for the applicant to prepare required documents for each stage.

<sup>a</sup>This row includes four applications that the LGP does not consider to be official submissions since the applicants did not pay the application fee. However, we included these applications in our analysis because the LGP included them in the application data they provided to us, and these applications demonstrate the level of interest in the solicitation. Additionally, the average elapsed time for intake review of applications to the EERE 08 solicitation is lower because applications for certain types of projects were not required to follow a two-part application process.

<sup>b</sup>No applications completed this stage for this solicitation.

<sup>c</sup>The minimum number of days elapsed for all applications for intake was 33 and the maximum number of days elapsed was 740.

<sup>d</sup>The minimum number of days elapsed for all applications for due diligence was 50 and the maximum number of days elapsed was 930.

<sup>e</sup>The minimum number of days elapsed for all applications for conditional commitment to closing was 41 and the maximum number of days elapsed was 407.

<sup>f</sup>The minimum number of days elapsed for all applications from intake to closing was 287 and the maximum number of days elapsed was 1,731.

<sup>g</sup>The minimum number of days elapsed for all applications from intake to rejection was 9 and the maximum number of days elapsed was 1,046.

From September 4, 2009, to July 29, 2011—a period of nearly 2 years—the LGP closed \$5.8 billion in loan guarantees for 13 applications under section 1705. In the last few months before the authority for section 1705 loan guarantees expired, the LGP accelerated its closings of section 1705 applications that had reached the conditional commitment stage. Thus, over the last 2 months before the authority for section 1705 expired, the LGP closed an additional \$9.3 billion in loan guarantees for 17 applications under section 1705.<sup>21</sup> The program did not use about \$600 million of the \$2.5 billion that Congress appropriated to pay credit subsidy costs before the section 1705 authority expired, and these funds were no longer available for use by LGP.

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<sup>21</sup>This effort was preceded by DOE's announcement on May 10, 2011, that the LGP would focus on 18 applications that officials believed were most likely to meet all the requirements for closing and begin construction prior to the September 30, 2011, expiration date.

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## The LGP Does Not Maintain Consolidated Information on Application Status

When we requested data from the LGP on the identity of applicants, status, and key dates for review of all the applications to its nine solicitations, the LGP did not have consolidated information on application status readily available. Instead, it had to assemble these data from various sources.

To respond to our initial data request, LGP staff provided information from the following five sources:

- “Origination portfolio” spreadsheets, which contain information for applications that are in the due diligence stage of the review process. These spreadsheets contain identifying information, the solicitation applied under, commitment or closing status, type of technology, overall cost, proposed or closed loan amount, and expected or actual approval dates. Information in these spreadsheets is limited. For example, they do not contain dates that the applicant completed each stage and do not have information on applications that have been rejected or withdrawn.
- “Tear sheet” summaries for each application, which give current status and basic facts about the project and its technology, cost, finances, and strengths and weaknesses. Tear sheets are updated periodically, or as needed, but LGP officials could not easily consolidate them because they were kept in word processing software that does not have analysis or summarization capabilities.
- “Application trackers,” which are spreadsheets that give basic descriptive information and status of applications for some solicitations. LGP staff said they were maintained for most, but not all, solicitations.
- “Project Tracking Information” documents showing graphic presentations of application status summaries, loan guarantee amounts requested, technology type, planned processing dates, and procurement schedules for technical reports. These documents were updated manually through December 20, 2010.
- “Credit subsidy forecasts,” which are documents that track the actual or projected credit subsidy costs of the section 1705 projects in various stages of the review process and the cumulative utilization of credit subsidy funding.



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LGP staff needed over 3 months to assemble the data and fully resolve all the errors and omissions we identified. LGP staff also made further changes to some of these data when we presented our analysis of the data to the LGP in October 2011.<sup>22</sup> According to LGP officials in 2010, the program had not maintained up-to-date and consolidated documents and data. An LGP official said at the time that LGP considered it more important to process loan guarantee applications than to update records. Because it took months to assemble the information required for our review, it is also clear that the LGP could not be conducting timely oversight of the program. Federal regulations require that records be kept to facilitate an effective and accurate audit and performance evaluation. These regulations—along with guidance from the Department of the Treasury and OMB—provide that maintaining adequate and proper records of agency activities is essential to oversight of the management of public resources.<sup>23</sup>

In addition, under federal internal control standards, federal agencies are to employ control activities, such as accurately and promptly recording transactions and events to maintain their relevance and value to management on controlling operations and making decisions.<sup>24</sup> Under these standards, managers are to compare actual program performance to planned or expected results and analyze significant differences. Managers cannot readily conduct such analysis of the LGP if the agency does not maintain consolidated information on applications to the program and their status. Moreover, the fact that it took the LGP 3 months to aggregate data on the status of applications for us suggests that its managers have not had readily accessible and up-to-date information and have not been doing such analysis on an ongoing basis. This is not consistent with one of the fundamental concepts of internal control, in which such control is not a single event but a series of actions and activities that occur throughout an entity's operations and on an ongoing

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<sup>22</sup>Errors and omissions included missing or incorrect dates associated with an applicant's progression to the next stage of LGP review; incorrect status (e.g., application listed as both withdrawn and rejected); inconsistent entries related to the loan guarantee amount requested by the applicant; and no status given.

<sup>23</sup>10 C.F.R. § 609.10(f)(1); U.S. Department of the Treasury, *Managing Federal Receivables A Guide for Managing Loans and Administrative Debt*, Financial Management Service (Washington, D.C.: 2005); and OMB Circular A-130.

<sup>24</sup>GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

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basis. Thus, providing managers with access to aggregated, updated data could facilitate more efficient management of the LGP.

Furthermore, without consolidated data about applicants, LGP actions, and application status, LGP staff may not be able to identify weaknesses, if any, in the program's application review process and approval procedures. For example, consolidated data on application status would provide a comprehensive snapshot of which steps of the review process are taking longer than expected and may need to be addressed. If program data were consolidated in an electronic tracking system, program managers could quickly access information important to managing the LGP, such as the current amount of credit subsidy obligated, as well as whether the agency is consistently complying with certain procedural requirements under its policies and regulations that govern the program. In addition, the program cannot quickly respond to requests for information about the program as a whole from Congress or program auditors.

In March 2011, the LGP acknowledged the need for such a system. According to the March 2011 LGP summary of its proposed data management project, as the number of applications, volume of data and records, and number of employees increased, the existing method for storing and organizing program data and documents had become inadequate, and needed to be replaced. In October 2011, LGP officials stated that while the LGP has not maintained a consolidated application tracking database across all solicitations, the program has started to develop a more comprehensive business management system that includes a records management system called "iPortal" that also could be used to track the status of applications. Officials did not provide a timetable for using iPortal to track the status of applications but said that work is under way on it. However, until iPortal or some other system can track applications' status, the LGP staff cannot be assured that consolidated information on application status necessary to better manage the program will be available.

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## The LGP Did Not Always Adhere to Its Review Process, Which May Pose Risks and Result in Inconsistent Treatment

We identified 43 key steps in the LGP's guidance establishing its review process for assessing and approving loan guarantee applications. The LGP followed most of its established review process, but the LGP's actual process differed from this established process at least once on 11 of the 13 applications we reviewed, in part because the process was outdated. In some cases, LGP did not perform applicable review steps and in other cases we could not determine whether the LGP had completed review steps. Furthermore, we identified more than 80 instances of deficiencies in documentation of the LGP's reviews of the 13 applications, such as missing signatures or dates. It is too early to evaluate the impact of the specific differences we identified on achieving program goals, but we and the DOE Inspector General have reported that omitting or poorly documenting review steps may pose increased financial risk to the taxpayer and result in inconsistent treatment of applications.

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## The LGP Did Not Consistently Follow Its Established Review Process, in Part Because the Process Was Outdated

We identified 43 key steps in the LGP credit policies and procedures manual and its other guidance that establish the LGP's review process for assessing and approving loan guarantee applications. Not all 43 steps are necessary for every application, since the LGP's guidance lets officials tailor aspects of the review process on an ad hoc basis to reflect the specific needs of the solicitation. For example, under the EERE 08 solicitation, the LGP required two parts of intake review for applications involving large projects that integrate multiple types of technologies, but it required only one part for small projects. Furthermore, according to LGP officials, they have changed the review process over time to improve efficiency and transparency, so the number of relevant steps also depends on when the LGP started reviewing a given application. LGP guidance recognizes the need for such flexibility and maintains that program standards and internal control need to be applied transparently and uniformly to protect the financial interests of the government. For more information on the key steps we identified, see appendix III.

According to private lenders we contacted who finance energy projects, the LGP's established review process is generally as stringent as or more stringent than those lenders' own due diligence processes. For example, like the LGP, private lenders evaluate a project's proposed expenses and income in detail to determine whether it will generate sufficient funds to support its debt payments. In addition, private lenders and the LGP both rely on third-party expertise to evaluate the technical, legal, and marketing risks that might affect the payments. Lenders who were not participating in the LGP generally agreed that the LGP's process, if followed, should provide reasonable management of risk. Some lenders

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that sponsored applications under the FIPP solicitation said that the LGP's review process was more rigorous than their own. They said this level of rigor was not warranted for the FIPP solicitation because it covered commercial technology, which is inherently less risky than the innovative technologies covered by other solicitations. Some private lenders we spoke with also noted that financing an innovative energy project involves a certain amount of risk that cannot be eliminated, and one lender said that a failure rate of 2 or 3 percent is common, even for the most experienced loan officers.

However, we found that the LGP did not always follow the review process in its guidance. The LGP completed most of the applicable review steps for the 6 applications that we reviewed in full, but its actual process differed from the established process at least once on 5 of the 6 applications we reviewed. We also conducted a more limited examination of 7 additional applications, in which we examined the steps where the actual process differed from the established process for the first 6 applications. We again found that the LGP's actual process differed from its established process at least once on 6 of the 7 applications. Table 4 summarizes review steps for which we either identified differences or could not determine whether the LGP completed a particular review step across all 13 applications. The 13 applications we reviewed represent all of the applications that had reached conditional commitment or closing, as of December 31, 2010, excluding 3 applications that had applied under the earliest solicitation, since the LGP's review process was substantially different for these 3 applications.<sup>25</sup>

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<sup>25</sup>The three excluded applications were from Solyndra, Beacon Power, and Sage Electrochromics, LLC. One of the 13 applications we reviewed was for a project with multiple sponsors. In this instance, we only reviewed the application with the largest loan guarantee amount request.

**Table 5: LGP's Adherence to Its Review Process for 13 Applications with Closed or Conditionally Committed Loan Guarantees, by Review Stage and Step**

| Review stage                      | Review step description   | Number of applications examined for review step | Not applicable | Applicable but not performed | Could not determine if step was performed | Completed |
|-----------------------------------|---|---|----------------|------------------------------|---|-----------|
| Intake                            | Part I technical review   | 6   | 2              | 0                            | 1   | 3         |
|                                   | Solicitation-specific ranking process for EERE 08 applicants  | 13  | 5              | 0                            | 8   | 0         |
|                                   | Obtain CRB approval prior to due diligence  | 13  | 3              | 6                            | 0   | 4         |
| Due diligence                     | Review of applicant's management (e.g., background check, credit check, Internal Revenue Service check) | 6   | 0              | 2                            | 1   | 3         |
|                                   | Obtain final independent engineering report prior to conditional commitment                             | 13  | 0              | 6                            | 0   | 7         |
|                                   | Obtain final independent marketing report prior to conditional commitment                               | 13  | 3              | 1                            | 1   | 8         |
|                                   | Complete OMB review of the LGP credit subsidy cost estimate   | 13  | 0              | 3                            | 7   | 3         |
| Conditional commitment to closing | Collect a full fee from an applicant at conditional commitment  | 13  | 0              | 1                            | 0   | 12        |
| <b>Total</b>                      |   |   | <b>13</b>      | <b>19</b>                    | <b>18</b>                                 | <b>40</b> |

Source: GAO analysis of LGP documentation supporting its application reviews.

Note: These differences represent our review of LGP documents for all 43 key review steps for six applications, and a targeted review of 9 steps for seven applications.

For the 13 applications we examined, we found 19 differences between the actual reviews the LGP conducted and the applicable review process steps established in LGP guidance. In most of these instances, according to LGP officials, the LGP did not perform an applicable review step because it had made changes intended to improve the process but had not updated the program's credit policies and procedures manual or other guidance governing the review process.

The following describes the 19 differences we identified, along with the LGP's explanations:

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- In six cases, the LGP did not obtain CRB approval prior to due diligence, contrary to the March 2009 version of its credit policies and procedures manual. This version states that CRB approval is an important internal check to ensure only the most promising projects proceed to due diligence. LGP officials explained that this step was not necessary for these applications because the CRB had verbally delegated to the LGP its authority to approve applications before these projects proceeded to due diligence. However, LGP documents indicate that CRB delegated approval authority after these projects had proceeded to due diligence.<sup>26</sup> According to an LGP official, the delegation of authority was not retroactive.
  - In seven cases, the LGP did not obtain final due diligence reports from independent consultants prior to conditional commitment, as required by its credit policies and procedures manual. Through their reporting, these independent third parties provide key input to the LGP's loan underwriting and credit subsidy analyses in technical, legal, and other areas such as marketing, as necessary. LGP officials said that it was a preferable practice to proceed to conditional commitment with drafts of these reports and obtain a final report just prior to closing. They said this practice helps the LGP reduce financial risk, since it allows the LGP to base its decision to close the loan guarantee on final reports rather than reports completed 1 to several months earlier. An LGP official explained that this part of the review process had evolved to meet the program's needs, but that these changes were not yet reflected in the manual. However, the LGP does not appear to have implemented this change consistently. Specifically, over the course of several months in 2009 and 2010, the LGP alternated between the old and the new process concerning final due diligence reports from independent consultants. In commenting on a draft of this report, LGP officials said that in all cases they received final independent consultant reports before the closing of the loan guarantees. Because the LGP's policies and procedures manual at the time required final reports at the conditional commitment stage, we reviewed the reports available at conditional commitment and did not review whether LGP received final reports before closing.

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<sup>26</sup>The documents LGP provided for this step indicated that the CRB decision to delegate its authority occurred on June 25, 2009. The projects in question proceeded to due diligence in May 2009.

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- In three cases, the LGP conditionally committed to a loan guarantee before OMB had completed its informal review of the LGP's credit subsidy cost estimate. According to the credit policies and procedures manual, OMB should be notified each time the LGP estimates the credit subsidy cost range, and informal discussions between OMB and LGP should ensue about the LGP estimate. This cost is to be paid by the borrower for all section 1703 projects to date and by the federal government for section 1705 projects. LGP officials explained that, in two of these cases, the LGP had provided OMB with their credit subsidy estimates, but that OMB had not completed its review because there were unresolved issues with the LGP estimates. LGP officials did not provide an explanation for the third case. Contrary to the manual, LGP officials said that OMB's informal review of the credit subsidy estimates for these applications was not a necessary prerequisite to conditional commitment because the actual credit subsidy cost is calculated just prior to closing and is formally approved by OMB. Furthermore, under section 1705, the government rather than the borrower, was to pay credit subsidy costs. Accordingly, the LGP used these credit subsidy estimates for internal planning purposes rather than for calculating a fee to the applicant. In contrast, the LGP completed OMB's informal review prior to conditionally committing to at least three of the other loan guarantees we reviewed—including one section 1705 project—and thus the LGP did not perform this step consistently across all projects. In its October 2011 update of its credit policies and procedures manual, the LGP retained the requirement that OMB review the LGP's credit subsidy cost estimate prior to conditional commitment. Further, the updated guidance added that formal discussions with OMB may be required each time OMB reviews LGP's credit subsidy cost estimate and should result with their approval.

In two cases, the LGP did not complete its required background check for project participants. The documents provided indicate that LGP did not determine whether the applicants had any delinquent federal debt prior to conditional commitment. In one of these cases, LGP officials said that the delinquent federal debt check was completed after conditional commitment. In the other case, the documents indicate that the sponsor did not provide a statement on delinquent debt, and LGP officials confirmed that LGP did not perform the delinquent debt check prior to conditional commitment.

- In one case, the LGP did not collect the full fee from an applicant at conditional commitment as required by the EERE 08 solicitation. According to a LGP official, the LGP changed its policy to require 20

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percent of this fee at conditional commitment instead of the full fee specified in the solicitation, in response to applicant feedback. This official said the policy change was documented in the EERE 09 solicitation, which was published on July 29, 2009. However, this particular application moved to conditional commitment on July 10, 2009, prior to the formal policy change.

As outlined in these cases, the LGP departed from its established procedures because, in part, the procedures had not been updated to reflect all current review practices. The version of the manual in use at the time of GAO's review was dated March 5, 2009, even though the manual states that it was meant to be updated at least on an annual basis and more frequently if needed. The LGP issued its first update of its credit policies and procedures manual on October 6, 2011,<sup>27</sup> even though the 2009 manual states that it was meant to be updated at least annually and more frequently if needed. We reviewed the revised manual and found that the revisions addressed many of the differences that we identified between the LGP's established and actual review processes. The revised manual also states that LGP analyses should be properly documented and stored in the new LGP electronic records management system. However, the revised guidance applies to loan guarantee applications processed after October 6, 2011, but not to the 13 applications we reviewed or to any of the 30 loan guarantees the LGP has closed to date.

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### The LGP Did Not Always Fully Document Review Steps

In addition to the differences between the actual and established review processes, in another 18 cases, we could not determine whether the LGP had performed a given review step. In some of these cases, the documentation did not demonstrate that the LGP had applied the required criteria. In other cases, the documentation the LGP provided did not show that the step had been performed. The following discusses these cases:

- In one case, we could not determine whether LGP guidance calls for separate part I and part II technical reviews for a nuclear front-end application or allows for a combined part I and part II technical review. The LGP performed a combined part I and part II technical review.

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<sup>27</sup>U.S. Department of Energy, *Credit Policies and Procedures Manual for Implementing Title XVII of the Energy Policy Act of 2005, Revised*, Loan Programs Office (Washington, D.C.: Oct. 6, 2011).



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- In eight cases, we could not determine the extent to which the LGP applied the required criteria for ranking applications to the EERE 08 solicitation. The LGP's guidance for this solicitation requires this step to identify "early mover" projects for expedited due diligence. The LGP expedited four such applications but the documentation neither demonstrated how the LGP used the required criteria to select applications to expedite nor why other applications were not selected.
  - In one case, we could not determine whether the LGP completed its required background check for project participants. The documents provided indicated there were unresolved questions involving one participant's involvement in a \$17 billion bankruptcy and another's pending civil suit.
  - In one case, we could not determine whether the LGP had received a draft or final marketing report prior to conditional commitment in accordance with its guidance. The LGP provided a copy of the report prepared before closing but did not provide reports prepared before conditional commitment.
  - In seven cases, LGP either did not provide documents supporting OMB's completion of its informal review of the LGP's estimated credit subsidy range before conditional commitment, or the documentation the LGP provided was inconclusive.

We also found 82 additional documentation deficiencies in the 13 applications we reviewed. For example, in some cases, there were no dates or authors on the LGP documents. The documentation deficiencies make it difficult to determine, for example, whether steps occurred in the correct order or were executed by the appropriate official. The review stage with the fewest documentation deficiencies was conditional commitment to closing, when 1 of the 82 deficiencies occurred. Table 6 shows the instances of deficient documentation that we identified.

**Table 6: Documentation Deficiencies Identified During 13 Application Reviews**

| Review phase                      | Missing author | Missing title or other identification | Missing final version or a signature | Missing date | Missing data or analysis | Inconsistent with other project documents |
|-----------------------------------|----------------|---------------------------------------|--------------------------------------|--------------|--------------------------|---|
| Intake                            | 15             | 6                                     | 2                                    | 17           | 8                        | 1   |
| Due diligence                     | 12             | 0                                     | 6                                    | 6            | 5                        | 3   |
| Conditional commitment to closing | 0              | 0                                     | 0                                    | 0            | 0                        | 1   |
| <b>Total</b>                      | <b>27</b>      | <b>6</b>                              | <b>8</b>                             | <b>23</b>    | <b>13</b>                | <b>5</b>                                  |

Source: GAO analysis of LGP documentation supporting its application reviews.

Note: These deficiencies represent our review of LGP documents for all 43 review steps for six applications and a targeted review of 9 steps for seven applications.

During our review, the LGP did not have a central paper or electronic file containing all the documents supporting the key review steps we identified as being part of the review process. Instead, these documents were stored separately by various LGP staff and contractors in paper files and various electronic storage media. As a result, the documents were neither readily available for us to examine, nor could the LGP provide us with complete documentation in a timely manner. For example, we requested documents supporting the LGP's review for six applicants in January 2011. For one of the applications, we did not receive any of the requested documents supporting the LGP's intake application reviews until April 2011. Furthermore, for some of the review steps, we did not receive documents responsive to our request until November 2011 and, as we discussed earlier, in 18 cases we did not receive sufficient documentation to determine whether the LGP performed a given review step. Federal regulations and guidance from Treasury and OMB provide that maintaining adequate and proper records of agency activities is essential to accountability in the management of public resources and the protection of the legal and financial rights of the government and the public.<sup>28</sup> Furthermore, under the federal standards for internal control, agencies are to clearly document internal control, and the documentation is to be readily available for examination in paper or electronic form.

<sup>28</sup>36 C.F.R. § 1222.22; U.S. Department of the Treasury, *Managing Federal Receivables: A Guide for Managing Loans and Administrative Debt*, Financial Management Service (Washington, D.C.: 2005) and OMB Circular A-130.

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Moreover, the standards state that all documentation and records should be properly managed and maintained.<sup>29</sup>

As stated above, the LGP recognized the need for a recordkeeping system to properly manage and maintain documentation supporting project reviews. In March 2011, the LGP adopted a new records management system called "iPortal" to electronically store documents related to each loan application and issued guidance for using this system. As of November 1, 2011, LGP officials told us that the system was populated with data or records relevant to conditionally committed and closed loan guarantees and that they plan to fully populate it with documentation of the remaining applications in a few months. The LGP was able to provide us with some additional documents from its new system in response to an early draft of this report, but the LGP did not provide additional documentation sufficient to respond to all of the issues we identified. Accordingly, other oversight efforts may encounter similar problems with documentation despite the new system.

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### Differences Between the Actual and Established Processes and Incomplete Documentation May Pose Risks

It is too early in the loan guarantees' terms to assess whether skipping or poorly documenting review steps will result in problems with the guarantees or the program. However, we and the DOE Inspector General have reported that omitting or poorly documenting review steps may lead to a risk of default or other serious consequences. Skipping or poorly documenting steps of the process during intake can lead to several problems. First, it reduces the LGP's assurance that it has treated applications consistently and equitably. This, in turn, raises the risk that the LGP will not select the projects most likely to meet its goals, which include deploying new energy technologies and ensuring a reasonable prospect of repayment. In July 2010, we reported that the inconsistent treatment of applicants to the LGP could also undermine public confidence in the legitimacy of the LGP's decisions. Furthermore, DOE's Inspector General reported in March 2011 that incomplete records may impede the LGP's ability to ensure consistency in the administration of

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<sup>29</sup>GAO/AIMD-00-21.3 states in part that internal control and all transactions and other significant events need to be clearly documented, and the documentation should be readily available for examination. OMB Circular A-130, *Management of Federal Information Resources* requires agencies to ensure that records management adequately document agency activities and ensure access to the records regardless of form or medium.

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the program, make informed decisions, and provide information to Congress, OMB, and other oversight bodies.<sup>30</sup> The Inspector General also stated that, in the event of legal action related to an application, poor documentation of the LGP's decisions may hurt its ability to prove that it applied its procedures consistently and treated applicants equitably. Moreover, incomplete records may leave DOE open to criticism that it exposed taxpayers to unacceptable financial risks.

Differences between the actual and established review processes that occur during or after due diligence may also lead to serious consequences. These stages of the review process were established to help the LGP identify and mitigate risks. Omitting or poorly documenting its decisions during these stages may affect the LGP's ability to fully assess and communicate the technical, financial, and other risks associated with projects. This could lead the program to issue guarantees to projects that pose an unacceptable risk of default. Complete and thorough documentation of decisions would further enable DOE to monitor the loan guarantees as projects are developed and implemented. Furthermore, without consistent documentation, the LGP may not be able to fully measure its performance and identify any weaknesses in its implementation of internal procedures.

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## Conclusions

Through the over \$30 billion in loan guarantees and loan guarantee commitments for new and commercial energy technologies that DOE has made to date, the agency has set in motion a substantial federal effort to promote energy technology innovation and create jobs. DOE has also demonstrated its ability to make section 1705 of the program functional by closing on 30 loan guarantees. It has also improved the speed at which it was able to move section 1705 applications through its review process. To date, DOE has committed to six loan guarantees under section 1703 of the program, but it has not closed any section 1703 loan guarantees or otherwise demonstrated that the program is fully functional. Many of the section 1703 applications have been in process since 2008 or before. As DOE continues to implement section 1703 of the LGP, it is even more important that it fully implement a consolidated system for overseeing the application review process and that LGP adhere to its review process and

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<sup>30</sup>U.S. Department of Energy, Office of Inspector General, *Audit Report: The Department of Energy's Loan Guarantee Program for Clean Energy Technologies*, DOE/IG-0849 (Washington, D.C.: Mar. 3, 2011).

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document decisions made under updated policies and procedures. It is noteworthy that the process LGP developed for performing due diligence on loan guarantee applications may equal or exceed those used by private lenders to assess and mitigate project risks. However, DOE does not have a consolidated system for documenting and tracking its progress in reviewing applications fully implemented at this time. As a result, DOE may not readily access the information needed to manage the program effectively and to help ensure accountability for federal resources. Proper recordkeeping and documentation of program actions is essential to effective program management. The absence of such documentation may have prevented LGP managers, DOE, and Congress from having access to the timely and accurate information on applications necessary to manage the program, mitigate risk, report progress, and measure program performance. DOE began to implement a new records management system in 2011, and LGP staff stated that the new system will enable them to determine the status of loan guarantee applications and to document review decisions. However, the LGP has neither fully populated the system with data or records on all applications it has received nor its decisions on them. Nor has DOE committed to a timetable to complete the implementation of the new records management system. Until the system has been fully implemented, it is unclear whether the system will enable the LGP to both track applications and adequately document its review decisions.

In addition, 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. DOE has not promptly updated its credit policies and procedures manual to reflect its changes in program practices, which has resulted in inconsistent application of those policies and procedures. It 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. Furthermore, the absence of adequate documentation may make it difficult for DOE to defend its decisions on loan guarantees as sound and fair if it is questioned about the justification for and equity of those decisions. DOE has recently updated its credit policies and procedures manual, which, if followed and kept up to date, should help the agency address this issue.

## Recommendations for Executive Action

To better ensure that LGP managers, DOE, and Congress have access to timely and accurate information on applications and reviews necessary to manage the program effectively and to mitigate risks, we recommend that the Secretary of Energy direct the Executive Director of the Loan Programs Office to take the following three actions:

- Commit to a timetable to fully implement a consolidated system that enables the tracking of the status of applications and that measures overall program performance.
- Ensure that the new records management system contains documents supporting past decisions, as well as those in the future.
- Regularly update the LGP's credit policies and procedures manual to reflect current program practices to help ensure consistent treatment for applications to the program.

## Agency Comments and Our Evaluation

We provided a copy of our draft report to DOE for review and comment. In written comments signed by the Acting Executive Director of the Loan Programs Office, it was unclear whether DOE generally agreed with our recommendations. The Acting Executive Director stated subsequently to the comment letter that DOE disagreed with the first recommendation and agreed with second and third recommendations. In its written comments, DOE also provided technical and editorial comments, which were incorporated as appropriate. DOE's comments and our responses to specific points can be found in appendix IV of this report.

Concerning our first recommendation that LGP commit to a timetable to fully implement a consolidated system that enables the tracking of the status of applications and that measures overall program performance, in its written comments, DOE states that the LGP believes that it is important that our report distinguish between application tracking and records management. We believe we have adequately distinguished the need for application tracking and management of documentation. These are addressed in separate sections of our report and in separate recommendations. DOE also states that LGP has placed a high priority on records management and is currently implementing a consolidated state-of-the-art records management system. In the statement subsequent to DOE's written comments, the Acting Executive Director stated the office did not agree to a hard timetable for implementing our first recommendation. As stated in the report draft, under federal internal

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control standards, agencies are to employ control activities, such as accurately and promptly recording transactions and events to maintain their relevance and value to management on controlling operations and making decisions. Because LGP had to manually assemble the application status information we needed for this review, and because this process took over 3 months to accomplish, we continue to believe DOE should develop a consolidated system that enables the tracking of the status of applications and that measures overall program performance. This type of information will help LGP better manage the program and respond to requests for information from Congress, auditors, or other interested parties.

Concerning our second recommendation that LGP ensure that its new records management system contains documents supporting past decisions as well as those in the future, subsequent to DOE's written comments, the Acting Executive Director stated that DOE agreed.

Concerning our third recommendation that LGP regularly update the credit policies and procedures manual to reflect current program practices, subsequent to DOE's written comments, the Acting Executive Director stated that DOE agreed.

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We are sending copies of this report to the appropriate congressional committees, the Secretary of Energy, and other interested parties. In addition, this report also is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made major contributions to this report are listed in appendix V.



Frank Rusco  
Director, Natural Resources and Environment

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# Appendix I: Objectives, Scope, and Methodology

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This appendix details the methods we used to examine the Department of Energy's (DOE) Loan Guarantee Program (LGP). We have reported four times and testified three times on this program, including two previous reports in response to the mandate in the 2007 Revised Continuing Appropriations Resolution to review DOE's execution of the LGP and to report our findings to the House and Senate Committees on Appropriations. (See Related GAO Products.) Because of questions regarding inconsistent treatment of applications raised by the most recent report in this mandated series,<sup>1</sup> this report, also in response to the mandate, assesses (1) the status of the applications to the LGP's nine solicitations and (2) the extent to which the LGP has adhered to its process for reviewing applications for loans that the LGP has committed to or closed.

To gather information on the program, we met with the LGP's management and staff from each of the program's divisions involved with the LGP's review of loan guarantee applications from intake to closing. In general, we reviewed the laws, regulations, policies and procedures governing the program and pertinent agency documents, such as solicitations announcing loan guarantee opportunities. We reviewed prior GAO and DOE Inspector General reports performed under or related to our mandate to audit the LGP. In addition, we gathered agency data and documents on the loan guarantee applications in process, those that had received a DOE commitment, and those that had been closed.

To determine the status of the applications to all nine of the solicitations for our first objective, we explored the LGP's available sources to see what data the program had compiled on the applications received and their current status in the review process. Because the LGP did not have comprehensive or complete application status data, we tailored a data request to collect data on the status of all 460 applications to the program. In consultation with agency officials, we prepared a data collection form requesting basic information on the identity, authority, amount requested, status, key milestone dates, and type of energy technology for all of the applications to date. These data were to provide a current snapshot of the program by solicitation and allow analysis of various characteristics. To ease the data collection burden, we populated the spreadsheets for each solicitation with the limited data from available

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<sup>1</sup>GAO-10-627.



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**Appendix I: Objectives, Scope, and Methodology**

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sources. LGP staff or contractors familiar with each solicitation completed the spreadsheets, and these spreadsheets were reviewed by managers before they were forwarded to GAO. We assessed the reliability of the data the LGP provided by reviewing these data, comparing them to other sources, and following up repeatedly with the agency to clarify questions and inconsistencies, and obtain missing data. This process enabled us to develop up-to-date program-wide information on the status of applications. This process resulted in data that were complete enough to describe the status of the program. Once we collected these data, we found them to be sufficiently reliable for our purposes. The LGP updated its March 2011 applicant status data as of July 29, 2011, and we obtained additional data on the conditional commitments and closings made by the September 30, 2011, expiration of the section 1705 authority for loan guarantees with a credit subsidy. To maintain consistency between the application status data initially provided by the LGP and later data updates, we use the terms application and project interchangeably, although in some cases multiple applications were submitted for a single project.

To assess the LGP's execution of its review process for our second objective, we first analyzed the law, regulations, policies, procedures, and published solicitations for the program and interviewed agency staff to identify the criteria and the key review process steps for loan guarantees, as well as the documents that supported the process. We provided a list of the key review steps we identified to LGP officials, and incorporated their feedback as appropriate. Based on the key review steps and supporting documentation identified by LGP staff, we developed a data collection instrument to analyze LGP documents and determine whether the LGP followed its review process for the applications reviewed. Since the LGP's review process varied across solicitations, we tailored the data collection instrument to meet the needs of the individual solicitations. We then selected a nonprobability sample of 6 applications from the 13 that had received conditional commitments from DOE or had progressed to closing by December 31, 2010, and had not applied under the Mixed 2006 solicitation, since the LGP's review process was substantially different for this solicitation and not directly comparable to later solicitations.<sup>2</sup> We requested documentation for these 6 applications

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<sup>2</sup>The three excluded Mixed 2006 applications were from Solyndra, Beacon Power, and Sage Electrochromics, LLC. One of the 13 applications we reviewed was for a project with multiple sponsors. In this instance, we only reviewed the application with the largest loan guarantee amount request.

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**Appendix I: Objectives, Scope, and Methodology**

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representing a range of solicitations and project types. We selected our initial sample to represent each of the five solicitations where applications had reached conditional commitment and different LGP investment officers to reduce the burden on LGP staff. We requested the documents supporting the LGP's review process from intake to closing and examined them to determine whether the applicable review steps were carried out. While we examined whether the applicable review steps were carried out, we did not examine the content of the documents and the quality of work supporting them. Where the documents were not clear about completion of the process, showed potential differences from the review process, or raised questions, we followed up with program officials to obtain an explanation and, as applicable, documentation supporting the explanation. On key questions where we identified differences from the review process for the initial sample of 6, we conducted a targeted review of documents for the 7 remaining applications that had reached conditional commitment or closed prior to December 31, 2010, excluding Mixed 2006 applicants. The six loan guarantee application files reviewed in full and the seven files reviewed in part were a nongeneralizable sample of applications.

To identify the initial universe of private lenders with experience financing energy projects, we reviewed the list of financial institutions that had submitted applications to the LGP under the Financial Institution Partnership Program (FIPP) solicitation. We used these firms as a starting point because of their knowledge about DOE's program and processes. To identify financial institutions involved in energy sector project finance outside of FIPP, we searched or contacted industry associations, industry conferences, and other industry groups in the same energy sectors that LGP solicitations to date have targeted. We interviewed seven private lenders identified through this process using a set of standard questions and the outline of the DOE's review process to gain insights on its comparability to the review process for underwriting loans in the private sector.

We conducted this performance audit from September 2010 to February 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Appendix II: Tables of Loan Guarantees Conditionally Committed or Closed

The following tables provide basic details on the loan guarantee applications that received a conditional commitment by September 30, 2011, or had proceeded to closing by that date. Table 7 lists applications under section 1703 with conditional commitments. Table 8 lists section 1705-eligible applications with conditional commitments that did not reach closing by the expiration of the section 1705 authority on September 30, 2011. Table 9 lists the section 1705 applications with conditional commitments that reached closing by the expiration of the section of the 1705 authority on September 30, 2011.

**Table 7: Section 1703 Applications Reaching Conditional Commitment as of September 30, 2011, by Solicitation**

Dollars in millions

| Solicitation               | Sponsor                   | Name                           | Technology         | Date conditional commitment offered | Guarantee amount |
|----------------------------|---------------------------|--------------------------------|--------------------|-------------------------------------|------------------|
| Mixed, 8/8/06              | SAGE Electrochromics, LLC | SAGE Electrochromics           | Energy Efficiency  | 3/5/2010                            | \$72             |
| EERE 08, 6/30/08           | ADA-ES, Inc.              | Red River                      | Energy Efficiency  | 12/8/2009                           | 245              |
| Nuclear Front-End, 6/30/08 | AREVA NC, Inc.            | Eagle Rock Enrichment Facility | Nuclear Front-End  | 5/20/2010                           | 2,000            |
| Nuclear Power, 6/30/08     | Georgia Power Company     | Vogtle 3&4                     | Nuclear Generation | 2/16/2010                           | 3,460            |
| Nuclear Power, 6/30/08     | MEAG                      | Vogtle 3&4                     | Nuclear Generation | 2/16/2010                           | 1,809            |
| Nuclear Power, 6/30/08     | Oglethorpe Power Corp.    | Vogtle 3&4                     | Nuclear Generation | 2/16/2010                           | 3,057            |
| <b>Total</b>               |                           |                                |                    |                                     | <b>\$10,643</b>  |

Source: GAO analysis of DOE data.

**Table 8: Section 1705-Eligible Applications Reaching Conditional Commitment as of September 30, 2011, by Solicitation**

Dollars in millions

| Solicitation     | Sponsor                | Name                             | Technology         | Date conditional commitment offered | Guarantee amount |
|------------------|------------------------|----------------------------------|--------------------|-------------------------------------|------------------|
| EERE 08, 6/30/08 | Nordic Windpower, Ltd. | Nordic Project                   | Wind Manufacturing | 7/2/2009                            | \$16             |
| EERE 09, 7/29/09 | Solar Millennium, LLC  | Blythe Solar Power Project Plant | Solar Generation   | 4/18/2011                           | 2,105            |
| FIPP, 10/7/09    | First Solar            | Topaz (CA)                       | Solar Generation   | 6/30/2011                           | 1,930            |
| FIPP, 10/7/09    | Multiple               | SolarStrong (USA)                | Solar Generation   | 9/8/2011                            | 344              |
| <b>Total</b>     |                        |                                  |                    |                                     | <b>\$4,395</b>   |

Source: GAO analysis of DOE data.

**Appendix II: Tables of Loan Guarantees  
Conditionally Committed or Closed**

**Table 9: Section 1705-Eligible Applications Reaching Closing as of September 30, 2011, By Solicitation**

Dollars in millions

| Solicitation     | Sponsor                         | Name                                | Technology          | Date<br>conditional<br>commitment<br>offered | Date<br>closed | Guarantee<br>amount |
|------------------|---------------------------------|-------------------------------------|---------------------|--|----------------|---------------------|
| Mixed, 8/8/06    | Beacon Power Corp.              | Beacon Power                        | Transmission        | 7/2/2009                                     | 8/6/2010       | \$43                |
| Mixed, 8/8/06    | BrightSource Energy, Inc.       | Ivanpah 1                           | Solar Generation    | 2/22/2010                                    | 4/5/2011       | 520                 |
| Mixed, 8/8/06    | POET, LLC                       | Project LIBERTY                     | Biomass             | 7/7/2011                                     | 9/23/2011      | 105                 |
| Mixed, 8/8/06    | Solyndra, Inc.                  | Solyndra Fab 2, LLC                 | Solar Manufacturing | 3/20/2009                                    | 9/4/2009       | 535                 |
| EERE 08, 6/30/08 | Abengoa Solar, Inc.             | Solana Project                      | Solar Generation    | 7/2/2010                                     | 12/20/2010     | 1,446               |
| EERE 08, 6/30/08 | Abound Solar, Inc.              | Abound Solar Manufacturing, LLC     | Solar Manufacturing | 7/2/2010                                     | 12/9/2010      | 400                 |
| EERE 08, 6/30/08 | AES Energy Storage, LLC         | Project Dyno                        | Transmission        | 7/30/2010                                    | 12/22/2010     | 17                  |
| EERE 08, 6/30/08 | BrightSource Energy, Inc.       | Ivanpah 2                           | Solar Generation    | 2/22/2010                                    | 4/5/2011       | 551                 |
| EERE 08, 6/30/08 | BrightSource Energy, Inc.       | Ivanpah 3                           | Solar Generation    | 2/22/2010                                    | 4/5/2011       | 556                 |
| EERE 08, 6/30/08 | First Wind Energy, LLC          | Kahuku Wind Power                   | Wind Generation     | 2/18/2010                                    | 7/26/2010      | 117                 |
| EERE 08, 6/30/08 | SoloPower, Inc.                 | SoloPower Manufacturing Facility    | Solar Manufacturing | 2/17/2011                                    | 8/19/2011      | 197                 |
| EERE 08, 6/30/08 | U.S. Geothermal, Inc.           | Neal Hot Springs                    | Geothermal          | 6/9/2010                                     | 2/23/2011      | 97                  |
| EERE 09, 7/29/09 | 1366 Technologies, Inc.         | Project Eagle                       | Solar Manufacturing | 6/17/2011                                    | 9/8/2011       | 150                 |
| EERE 09, 7/29/09 | Abengoa Bioenergy U.S. Holding  | Abengoa Bioenergy Biomass of Kansas | Biomass             | 8/19/2011                                    | 9/29/2011      | 132                 |
| EERE 09, 7/29/09 | Abengoa Solar, Inc.             | Mojave Solar Project                | Solar Generation    | 6/14/2011                                    | 9/23/2011      | 1,202               |
| EERE 09, 7/29/09 | Cogentrix Solar Services, LLC   | Alamosa Solar Generating Project    | Solar Generation    | 5/10/2011                                    | 9/9/2011       | 91                  |
| EERE 09, 7/29/09 | Nextlight Renewable Energy, LLC | Antelope Valley Solar Ranch 1       | Solar Generation    | 6/30/2011                                    | 9/30/2011      | 646                 |
| EERE 09, 7/29/09 | Nextlight Renewable Energy, LLC | Agua Caliente                       | Solar Generation    | 1/20/2011                                    | 8/5/2011       | 967                 |
| EERE 09, 7/29/09 | Sempra Generation               | Mesquite Solar Energy               | Solar Generation    | 6/15/2011                                    | 9/28/2011      | 337                 |
| EERE 09, 7/29/09 | Solar Reserve, LLC              | Tonopah Project                     | Solar Generation    | 5/19/2011                                    | 9/28/2011      | 737                 |
| EERE 09, 7/29/09 | Sunpower Corp.                  | California Valley Solar Ranch       | Solar Generation    | 4/12/2011                                    | 9/30/2011      | 1,237               |

**Appendix II: Tables of Loan Guarantees  
Conditionally Committed or Closed**

Dollars in millions

| Solicitation             | Sponsor                                     | Name  | Technology       | Date<br>conditional<br>commitment<br>offered | Date<br>closed | Guarantee<br>amount |
|--------------------------|---|---|------------------|--|----------------|---------------------|
| EERE 09, 7/29/09         | Yale University                             | Record Hill Wind                                | Wind Generation  | 3/3/2011                                     | 8/15/2011      | 102                 |
| Transmission,<br>7/29/09 | LS Power Associates,<br>LP                  | Southwest Intertie<br>Project (SWIP) -<br>South | Transmission     | 10/19/2010                                   | 2/11/2011      | 343                 |
| FIPP, 10/7/09            | Caithness Energy,<br>LLC                    | Shepherds Flat<br>(OR)                          | Wind Generation  | 10/8/2010                                    | 12/16/2010     | 1,051               |
| FIPP, 10/7/09            | First Solar                                 | Desert Sun (CA)                                 | Solar Generation | 6/30/2011                                    | 9/30/2011      | 1,169               |
| FIPP, 10/7/09            | Nevada Geothermal<br>Power Company          | Blue Mountain (NV)                              | Geothermal       | 6/15/2010                                    | 9/3/2010       | 79                  |
| FIPP, 10/7/09            | NextEra                                     | Genesis Solar (CA)                              | Solar Generation | 6/14/2011                                    | 8/26/2011      | 682                 |
| FIPP, 10/7/09            | Noble Environmental<br>Power, LLC           | Noble Granite (NH)                              | Wind Generation  | 6/21/2011                                    | 9/23/2011      | 135                 |
| FIPP, 10/7/09            | Ormat Nevada, Inc.                          | Ormat (NV)                                      | Geothermal       | 6/9/2011                                     | 9/23/2011      | 280                 |
| FIPP, 10/7/09            | Prosun Solar<br>Development<br>Company, LLC | Project Amp (USA)                               | Solar Generation | 6/22/2011                                    | 9/30/2011      | 1,120               |
| <b>Total</b>             |   |   |                  |  |                | <b>\$15,044</b>     |

Source: GAO analysis of DOE data.

## Appendix III: Key Tasks in the LGP's Review and Approval Process for Loan Guarantee Applications

Table 10 provides basic details about key review tasks in LGP's process for reviewing and approving loan guarantee applications, as identified from our review of relevant laws, regulations, LGP guidance, published solicitations and interviews with LGP officials. These tasks formed the basis for our examination of LGP files to determine if LGP followed its review process for each of the 13 applications that had received conditional commitments from DOE or had progressed to closing by December 31, 2010, and had not applied under the Mixed 2006 solicitation.<sup>1</sup> Accordingly, the tasks listed below reflect LGP's review process for the applications we reviewed and do not reflect LGP's review process for applicants to the Mixed 2006 solicitation, which was substantially different and not directly comparable to later solicitations. Additionally, since we found minor variations in LGP's review process across the solicitations, we have noted below which tasks are only applicable under certain solicitations. If no exceptions are listed, then the particular task is applicable across all the relevant solicitations.

**Table 10: Key Review and Approval Tasks for Loan Guarantee Applications, by Review Stage**

| Review stage and task  | Description  |
|--|--|
| <b>Intake</b>  |  |
| 1. Collect part I application fee.   | The first of three fees that LGP collects during the review process. LGP is required by its authorizing legislation to charge and collect sufficient fees to cover the program's administrative costs.   |
| 2. Perform part I completeness check.  | LGP reviews applications using a solicitation-specific checklist to document that the application package is complete.   |
| 3. Perform innovation review ( <i>EERE 08 applicants</i> ).  | LGP reviews applications to determine if the proposed project uses an innovative energy technology, as required by the program's authorizing legislation. For later solicitations, this review was incorporated into the LGP's technical review.   |
| 4. Perform part I technical review ( <i>2008 Nuclear Power and Nuclear Front-End</i> ) or commercial review ( <i>FIPP</i> ). | LGP analyzes the project's eligibility and responsiveness to statutory and program requirements, such as the project's <ul style="list-style-type: none"> <li>technical relevance against DOE requirements,</li> <li>technical approach and work plan, and</li> <li>environmental and technological benefits.</li> </ul> |

<sup>1</sup>The three excluded Mixed 2006 applications were from Solyndra, Beacon Power, and Sage Electrochromics, LLC. One of the 13 applications we reviewed was for a project with multiple sponsors. In this instance, we only reviewed the application with the largest loan guarantee amount request.

**Appendix III: Key Tasks in the LGP's Review  
and Approval Process for Loan Guarantee  
Applications**

| <b>Review stage and task</b>  | <b>Description</b>   |
|---|--|
| 5. Perform part I financial review (2008 Nuclear Power and Nuclear Front-End).  | LGP analyzes <ul style="list-style-type: none"> <li>creditworthiness elements such as sponsor/management capabilities, financial/business plans, and market factors; and</li> <li>programmatic elements such as (a) construction and start-up factors and (b) legal, regulatory, and permitting factors.</li> </ul>  |
| 6. Perform emissions review or lifecycle analysis (EERE 08 and EERE 09 applicants).   | Loan guarantee applications under the EERE 08 and EERE 09 solicitations must pass an emissions analysis to meet the authorizing law's greenhouse gas emissions goals.  |
| 7. Perform review for solicitation-specific eligibility requirements. <sup>a</sup>  | Depending on the solicitation, loan guarantee applications must meet certain solicitation-specific eligibility requirements, related to <ul style="list-style-type: none"> <li>certain project types,</li> <li>certain technology categories, and</li> <li>construction commencement requirements for section 1705 projects.</li> </ul>  |
| 8.a. Rank projects to identify "Early Movers" (EERE 08 only).   | LGP identifies the projects that present the fewest obstacles in moving forward to begin the technical and financial review process first. The ranking factors are related to <ul style="list-style-type: none"> <li>level of environmental review required under the National Environmental Policy Act of 1970,</li> <li>financial structure,</li> <li>readiness to proceed, and</li> <li>offtake agreements if applicable (an agreement to buy all or a substantial part of the output of an energy project).</li> </ul> |
| 8.b. Rank Projects and Identify Project Strengths and Weaknesses as part of the part I review (2008 Nuclear Power and Nuclear Front-End). | The 2008 Nuclear Power and Front-End solicitations call for an early ranking of projects. The ranking factors are related to <ul style="list-style-type: none"> <li>the prospect of repayment,</li> <li>strength of the project and sponsor, and</li> <li>regulatory status.</li> </ul>  |
| 9. Notify applicants of intent to proceed/invite part II submissions (part II submissions exclude certain EERE 08 projects).              | For solicitations with a one-part intake process, applicants are notified of LGP's intent to proceed with its review. For solicitations with a two-part intake process, applicants are notified they have qualified under part I and are invited to submit application materials for part II.  |
| 10. Collect part II application fee. <sup>b</sup>   | The second of three fees that LGP collects during the review process. LGP is required by the authorizing legislation to charge and collect sufficient fees to cover the program's administrative costs.  |
| 11. Perform part II completeness check.   | LGP reviews applications using a solicitation-specific checklist to document that the part II application package is complete.   |
| 12. Perform part II technical review (excludes FIPP).   | LGP analyzes <ul style="list-style-type: none"> <li>the project's technical relevance against DOE requirements,</li> <li>track record and experience of applicant,</li> <li>project work plan, and</li> <li>environmental benefits of project.</li> </ul>  |

**Appendix III: Key Tasks in the LGP's Review  
and Approval Process for Loan Guarantee  
Applications**

| <b>Review stage and task</b>  | <b>Description</b>  |
|---|---|
| 13. Perform part II financial review ( <i>excludes FIPP</i> ).  | LGP analyze <ul style="list-style-type: none"> <li>• creditworthiness elements such as sponsor/management capabilities, financial/business plans, and market factors; and</li> <li>• programmatic elements such as (a) construction and start-up factors and (b) legal, regulatory, and permitting factors.</li> </ul>  |
| 14. Perform an environmental critique and synopsis.   | LGP may prepare a publicly available environmental critique and synopsis to document the consideration given to environmental factors and record that the relevant environmental consequence of each alternative has been considered in its evaluation and selection process.   |
| 15. Application screening/ranking sessions for finalization of merit review scores for selections to due diligence.   | To focus limited loan guarantee funds on the best applicants, LGP evaluates and competitively ranks all applications within each solicitation's cohort. This ranking is the basis for LGP's decision to invite applicants to due diligence.   |
| 16. DOE's Credit Review Board (CRB) approves projects recommended for due diligence by LGP ( <i>only projects proceeding to due diligence prior to 6/25/09</i> ). | DOE's CRB reviews LGP's recommendations of projects for due diligence and provides approval. The CRB delegated this authority to LGP on June 25, 2009, and this task was phased out for applications proceeding to due diligence following this decision.   |
| 17. Notify applicant of LGP's decision to proceed into due diligence ( <i>excludes FIPP</i> ).  | After clearing requirements of parts I and II, the applicants are notified that they will proceed into due diligence.   |
| <b>Due diligence</b>  |   |
| 18. Evaluate financing plan and assess financial viability.   | To evaluate the project in detail, LGP will <ul style="list-style-type: none"> <li>• thoroughly review the uses and sources of funds;</li> <li>• analyze adequacy, leverage, timing of funding;</li> <li>• review terms/rights of funding source;</li> <li>• assess the adequacy of proposed contingency/reserve funding;</li> <li>• determine compliance with program requirements from the law, final regulations, and the solicitation;</li> <li>• assess the project's financial viability, with an emphasis on the applicant's ability to repay the guaranteed portion of loan; and</li> <li>• evaluate assumptions underlying projected revenues/expenses/likelihood technical performance will be achieved.</li> </ul> |
| 19. Perform a review of applicant's management.   | LGP performs certain checks (e.g., background check, credit check, IRS check) to evaluate the key players for the loan guarantee applicant.   |
| 20. Evaluate project risks and identify risk mitigants.   | To evaluate the project's risks and potential mitigants, LGP will <ul style="list-style-type: none"> <li>• identify, assess, and estimate the impact of risks associated with the project;</li> <li>• determine the types and magnitude of the risks associated with the project;</li> <li>• determine the proper risk allocation among the parties; and</li> <li>• determine the extent to which risks have been mitigated.</li> </ul>   |
| 21. Perform a financial model analysis and stress-test.   | To evaluate the project's financial model, LGP will <ul style="list-style-type: none"> <li>• verify the applicant's calculations for its financial model, and</li> <li>• quantify the impacts of risks by stress-testing the applicant's and LGP's financial models for changes in assumptions.</li> </ul>  |



**Appendix III: Key Tasks in the LGP's Review  
and Approval Process for Loan Guarantee  
Applications**

| <b>Review stage and task</b>   | <b>Description</b>  |
|--|---|
| 22. Assess strengths and weaknesses of project participants.   | LGP will examine the sponsor's investment to date and financial/managerial capability to implement the project as proposed, including <ul style="list-style-type: none"> <li>the project sponsor's track record in project development and the technology used in the application,</li> <li>the project sponsor's financial strength and resources,</li> <li>the strategic value of the project to the sponsor, and</li> <li>the experience of the project's management team.</li> </ul>                                      |
| 23. Assess whether an environmental assessment, environmental impact statement, or categorical exclusion applies. <i>(For FIPP projects, this assessment step occurs during intake.)</i> | As required by the National Environmental Policy Act of 1970 (NEPA), LGP reviews the project and determines which environmental review process is necessary.  |
| 24. Prepare Environmental Assessment, Environmental Impact Statement or Categorical Exclusion.   | Based on LGP's analysis under task 23, LGP prepares the appropriate documents, which include a description of any significant findings under other applicable environmental laws.   |
| 25. Identify significant findings under other applicable environmental laws.   |   |
| 26. Receive independent engineering/technical consultant report.   | To determine the technical efficacy of the project, LGP or an independent engineering firm, will thoroughly review the applicant's independent engineering report, including consideration of factors such as environmental impact and infrastructure requirements. This review also provides input for the risks and mitigants section of the credit paper.  |
| 27. Receive independent legal analysis.  | To review the project's legal structure, LGP or an external firm will <ul style="list-style-type: none"> <li>analyze draft legal agreements among project participants,</li> <li>analyze intellectual property rights of participants in the project to use the proposed technology, and</li> <li>provide input for the risks and mitigants section of the credit paper.</li> </ul>   |
| 28. Receive independent marketing consultant report (as applicable).   | As necessary, LGP will consult with external marketing advisors to assess the project's market and off-take risk as part of the underwriting and credit analysis process. This assessment should be supported by data, examples, and/or research that substantiate the score assigned for each attribute.   |
| 29. Negotiate term sheet.  | Based on its due diligence analysis and input from any external advisors, LGP prepares a term sheet and negotiates its provisions with the applicant.   |
| 30. Calculate expected recovery rate.  | LGP calculates the percentage of value the agency can expect to recover in the event of default.  |
| 31. Prepare a credit approval package.   | LGP assembles key documents describing the proposed loan guarantee agreement and project for internal review. These include <ul style="list-style-type: none"> <li>the credit paper providing an overview of the project and its attributes,</li> <li>available third-party input,</li> <li>draft term sheet,</li> <li>internal risk rating matrix,</li> <li>recovery rate notching matrix,</li> <li>compliance checklist, and</li> <li>presentation summarizing the transaction for internal and external review.</li> </ul> |

**Appendix III: Key Tasks in the LGP's Review  
and Approval Process for Loan Guarantee  
Applications**

| <b>Review stage and task</b>  | <b>Description</b>   |
|---|--|
| 32. Credit committee reviews and approves the credit approval package.  | LGP management internal review and approval step.  |
| 33. Office of Management and Budget (OMB) reviews LGP's credit subsidy estimate.                                    | OMB reviews LGP's calculation of the estimated credit subsidy cost range for the project and provides informal approval. The credit subsidy cost is based on a formula designed to determine the net present value of the estimated cost to the federal government of guaranteeing the loan. |
| 34. LGP consults with U.S. Treasury regarding the commitment of Federal Financing Bank funds.                       | The Department of the Treasury reviews the transaction.  |
| 35. DOE's CRB approves projects recommended by LGP for conditional commitment.                                      | DOE leadership review and approval step.   |
| <b>Conditional commitment to closing</b>  |  |
| 36. DOE offers applicant conditional commitment for a loan guarantee and applicant accepts.                         | DOE conditionally commits to issuing a loan guarantee agreement dependent upon whether the conditions precedent laid out in the term sheet are met. Upon accepting the offer, the applicant pays all or a portion of the second fee, depending on the solicitation.                          |
| 37. LGP prepares and negotiates definitive financing documentation  | LGP and external counsel prepare and negotiate the final financing terms and loan guarantee agreement.   |
| 38. LGP receives final credit rating from a rating agency via the applicant.  | The applicant obtains and provides final credit rating to LGP.   |
| 39. LGP legal team circulates an action memo to all relevant parties for concurrence and the Secretary's signature. | Internal review and approval step that includes a crosswalk between the key terms at the time of conditional commitment and the final closing terms, including any material adverse differences.   |
| 40. OMB formally approves the final credit subsidy cost.  | OMB review and key decision step.  |
| 41. Outside counsel confirms that all conditions precedent to the loan guarantee agreement have been satisfied.     | LGP asks outside counsel to verify that the applicant has met all of the terms agreed to at conditional commitment as preconditions for LGP's approval of the final loan guarantee agreement.  |
| 42. DOE and applicant execute loan agreement, and DOE issues guarantee.   | The final loan guarantee documents are executed at closing and the loan is considered closed once the agreements have been executed.   |
| 43. First funds disbursement.   | At the time of or shortly after the loan guarantee's closing, the Federal Financing Bank, or other lender, disburses the first payment of funds to the loan guarantee recipient.   |

Sources: GAO analysis of DOE guidance, published solicitations, and relevant regulations

<sup>a</sup>According to LGP officials, this step is a component of the innovation and other eligibility reviews rather than a separate step. However, we included it as a separate step in our list of key review tasks since it was an important aspect of the process.

<sup>b</sup>As applicable, for solicitations where LGP established a two part application process for some or all applicants (*excludes stand-alone or manufacturing projects that applied under EERE 08*).

# Appendix IV: Comments from the Department of Energy

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



## Department of Energy

Washington, DC 20585

FEB 23 2012

Mr. Frank Rusco  
Director, Natural Resources and Environment  
U.S. Government Accountability Office  
441 G Street NW  
Washington, D.C. 20548

Dear Mr. Rusco:

Thank you for the opportunity to comment on the Government Accountability Office's (GAO) draft report on the Department of Energy's (DOE or Department) Loan Guarantee Program (LGP), *Further Actions Are Needed to Improve Tracking and Review of Applications*. A draft statement of facts was provided to the Department for review on October 20, 2011, and a draft report was sent on January 19, 2012.

As the GAO's report makes clear, **commercial lenders interviewed by GAO have stated that LGP's underwriting and due diligence standards are as rigorous as, or more rigorous than, those in the private sector.** Specifically, GAO reports that:

- "According to private lenders we contacted who finance energy projects, the LGP's established review process is generally as stringent as or more stringent than those lenders' own due diligence processes."
- "Some lenders that sponsored applications under the FIPP [Financial Institution Partnership Program] solicitation said that the LGP's review process was more rigorous than their own."
- "Some private lenders we spoke with also noted that financing an innovative energy project involves a certain amount of risk that cannot be eliminated."
- "It is noteworthy that the process DOE developed for performing due diligence on loan guarantee applications equals or exceeds those used by private lenders to assess and mitigate project risks."

As the GAO report also noted, as of September 30, 2011, the LGP had made \$16.2 billion in loan guarantees to 28 projects under Section 1705 of the Energy Policy Act of 2005. To put this in context, in the approximately two and one-half years since the Section 1705 program was authorized by Congress, **the Department managed to build and continuously improve an organization that has succeeded in making an unprecedented level of clean energy investments while maintaining standards that are as high or higher than major financial institutions in the United States.**

The LGP's portfolio includes a broad range of clean energy technologies under Title XVII, including two biomass projects, three geothermal power projects, 12 solar power generation projects, four solar manufacturing projects, three transmission/storage projects and four wind power generation projects.

The LGP has been recognized as an industry leader in the clean energy financing sector. In the recently published Bloomberg New Energy Finance Clean Energy and Energy Smart Technology League Tables, six of the "Asset Finance – Top 10 Deals" were LGP transactions, and LGP's loan guarantee support resulted in the Federal Financing Bank being ranked #1 in the



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See comment 1.

See comment 2.

See comment 3.

"Asset Finance – Lead Arrangers" category. The #1 ranking reflects more than \$10 billion in deal credit across 13 transactions.

While the GAO focused on recordkeeping within the loan program, the report should not be read as a comprehensive evaluation of the LGP. The GAO report acknowledged: "We did not evaluate the quality of the LGP's analyses supporting the completion of these [review] steps." As a result, the GAO's findings do not purport to assess the credit risks from the substantive quality of the LGP's underwriting of any transactions. DOE hopes that the GAO report makes clear to readers that the scope of GAO's review did not include an analysis of the merits and creditworthiness of any DOE loan guarantees. As an independent review by outside experts of the overall health of the loan program's portfolio recently concluded, the LGP's portfolio holds significantly less risk than that anticipated by Congress in funding the programs.


With respect to the GAO's findings on the LGP's recordkeeping, we note the following:

- Most, if not all, of GAO's findings relate to procedures that the LGP had in place in 2009 and early 2010, rather than those in place during 2011 or 2012. The GAO acknowledged that its review only covered six applications (and it collected more limited information for seven projects) that had received conditional commitments or had closed by December 31, 2010, and five of those applications had previously been the subject of a GAO report from July 2010.
- The GAO did not review any of the 23 projects that received conditional commitments in 2011, nor does it account for any of the organizational, procedural, transactional, and system improvements the LGP has implemented during this period. The LGP continuously updates its processes, practices, and procedures to adapt to applicable market conditions and prudent industry standards.
- Currently the LGP has a robust records management platform, and is in the process of deploying a consolidated state-of-the-art business management system. In addition, the LGP has designed, tested, and deployed a state-of-the-art electronic portfolio management system.

Enclosed please find the Department's response to GAO's recommendations and separate technical and factual comments on specific items in the draft report. While some of GAO's observations may have been valid in 2009 and early 2010, the LGP has since instituted many processes and systems not mentioned in the report that have addressed these concerns. It is therefore inappropriate to suggest that LGP oversight has in any way been ineffective without first considering the extent and value of these established and on-going process and system improvements.

The LGP remains committed to promoting the objectives of the Title XVII program and will continue to accelerate the commercial use of innovative technologies, contribute to economic growth, and promote projects that yield long term environmental benefits, at the same time maintaining program objectivity and protecting the interests of the American taxpayer.

Sincerely,

  
David G. Frantz  
Acting Executive Director  
Loan Programs Office

Enclosures

**Appendix IV: Comments from the Department  
of Energy**

Appendix A

**U.S. Department of Energy  
GAO -12-157 – “Further Actions Are Needed to  
Improve Tracking and Review of Applications”**

**Response to the GAO Recommendations**

GAO Recommendation: Commit to a timetable to fully implement a consolidated system that enables the tracking of the status of applications and that measures overall program performance.

DOE Response: The LGP believes that it is important that the GAO report distinguish between “project tracking” and “records management.” LGP has placed a high priority on records management and is currently implementing a consolidated state-of-the-art records management system. This system should be distinguished from the GAO’s concept of a consolidated “project tracking” database across all LGP solicitations.

Each LGP solicitation is designed to provide unique application and project evaluation criteria. The manufacturing or generation projects proposed under the various LGP solicitations cover a wide range of nuclear energy, fossil fuels, renewable energy, and transmission technologies. The Department utilizes a broad array of resources and expertise – scientific, engineering, financial, environmental and legal – to analyze these highly differentiated projects and technologies. To track projects, the Loan Guarantee Origination Division (Origination) intake team maintains separate spreadsheets for each solicitation containing core project information and the status of each application under consideration. Origination meets weekly to provide updates and discuss developments on due diligence activities, which are then recorded in various DOE internal reports. While the GAO report suggests that the LGP create a comprehensive “project tracking” database across all solicitations, such a consolidated tracker is impractical for the highly varied and specialized processes of the LGP.

To achieve its objectives, the LGP is organizing the voluminous records for each project in its records management system to distinguish the evaluation bases employed for various technologies and is employing a continuous improvement management approach in its robust records management and comprehensive project tracking to ensure that LGP staff can readily access the historical and current information they need on a day-to-day basis and over time.

In addition to continuously refining and enhancing its existing records management platform, the LGP is in the process of deploying a consolidated state-of-the-art business management system, and has designed, tested, and deployed a state-of-the-art electronic portfolio management system.

GAO Recommendation: Ensure that the new records management system contains documents supporting past decisions as well as those in the future.

DOE Response: The LGP has designed, developed, and deployed a portfolio management system which will interface with the records management platform and maintain on-going reports on all conditionally committed and closed projects. This integration will ensure that historical records are organized and maintained appropriately and on-going project status reports are retained and updated.

See comment 4.

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*GAO Recommendation:* Regularly update the LGP's credit policies and procedures manual to reflect current program practices to help ensure consistent treatment for applications to the program.

*DOE Response:* The LGP last updated its credit policies and procedures manual on October 6, 2011, and appreciates that GAO noted in its report that the updated manual addressed many of the differences GAO identified between the LGP's established and actual review processes. The LGP is committed to further updating its credit policies and procedures manual as appropriate.

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Appendix IV: Comments from the Department  
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The following are GAO's comments on the Department of Energy's letter dated February 23, 2012.

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## GAO Comments

1. We disagree with DOE's assertion that our findings relate only to procedures that LGP had in place in 2009 and early 2010. We compared LGP's actual process to its established process for each of the applications that reached closing or conditional commitment by December 31, 2010. As we note in the report, LGP did not revise its policies and procedures manual until October 2011, so the same established procedures were in place for all of the applications that closed by September 30, 2011. We did not review any of the applications that were committed or closed during 2011 in depth, in part because it took through November 2011 for LGP to respond to our repeated requests for available documentation for the applications closed or committed to through 2010. Our 2010 report on LGP (GAO-10-627) and this report had information on five of the same applications. We examined DOE's review process for these applications in much more depth for this report than in the previous one. We did take into account changes in LGP procedures, systems, and other improvements as part of our review, as noted by the references to LGP's new records management system and its updated policies and procedures manual. We also took into account changes in LGP policies and procedures that affected the 13 files that we reviewed, when LGP was able to document that these changes had occurred.
2. As noted in the report, these systems were not fully implemented at the time we were gathering data for our review and this is still the case, according to DOE's written comments, dated February 23, 2012.
3. As stated above, we disagree with LGP's statement that our findings relate only to procedures that LGP had in place in 2009 and early 2010. As we note in the report, LGP did not revise its policies and procedures manual until October 2011, so the same established procedures were in place for all of the applications that closed by September 30, 2011. The report describes LGP's efforts to update its documentation management and tracking systems and notes that none of these were fully implemented at the time of our review.
4. DOE disagrees with the recommendation to implement an application tracking system. However, as noted in our report and DOE's comments, LGP is in the process of implementing a consolidated

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**Appendix IV: Comments from the Department  
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state of the art business management system that DOE believes may address this need. As we stated in the draft report, under federal internal control standards, federal agencies are to employ control activities, such as accurately and promptly recording transactions and events to maintain their relevance and value to management on controlling operations and making decisions. Because LGP had to manually assemble the application status information we needed for this review, and because this process took the program over three months to accomplish, we continue to believe DOE should develop a consolidated system that enables the tracking of the status of applications and that measures overall program performance. This type of information will help LGP better manage the program and respond to requests for information from Congress, auditors, or other interested parties.



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## Appendix V: GAO Contact and Staff Acknowledgments

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### GAO Contact

Frank Rusco (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov)

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### Staff Acknowledgments

In addition to the individual named above, Karla Springer, Assistant Director; Marcia Carlsen; Cindy Gilbert; Cathy Hurley; Emily Owens; John Scott; Ben Shouse; Carol Shulman; Barbara Timmerman; and Lisa Van Arsdale made key contributions to this report.

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## Related GAO Products

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*Recovery Act: Status of Department of Energy's Obligations and Spending.* [GAO-11-483T](#). Washington, D.C.: March 17, 2011.

*Department Of Energy: Further Actions Are Needed to Improve DOE's Ability to Evaluate and Implement the Loan Guarantee Program.* [GAO-10-627](#). July 12, 2010.

*Recovery Act: Factors Affecting the Department of Energy's Program Implementation.* [GAO-10-497T](#). March 4, 2010.

*American Recovery and Reinvestment Act: GAO's Role in Helping to Ensure Accountability and Transparency for Science Funding.* [GAO-09-515T](#). March 19, 2009.

*Department Of Energy: New Loan Guarantee Program Should Complete Activities Necessary For Effective and Accountable Program Management.* [GAO-08-750](#). July 7, 2008.

*Department Of Energy: Observations On Actions To Implement The New Loan Guarantee Program For Innovative Technologies.* [GAO-07-798T](#). September 24, 2007.

*The Department of Energy: Key Steps Needed to Help Ensure the Success of the New Loan Guarantee Program for Innovative Technologies by Better Managing Its Financial Risk.* [GAO-07-339R](#). February 28, 2007.

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# **EXHIBIT 14**

**From:** Silver, Jonathan [REDACTED]  
**Sent:** Friday, June 25, 2010 12:42 PM (GMT)  
**To:** 'James C McCrea' [REDACTED]  
**Subject:** RE: Meeting Schedule -- Treasury and Policy Issue Discussions

---

You better let him know that the WH wants to move Abound forward. Policy will have to wait unless they have a specific policy problem with abound.

Jonathan Silver  
Executive Director  
Loan Programs  
US Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585  
[REDACTED]

---

**From:** James C McCrea [REDACTED]  
**Sent:** Friday, June 25, 2010 1:29 AM  
**To:** Silver, Jonathan  
**Subject:** FW: Meeting Schedule -- Treasury and Policy Issue Discussions

Jim

---

James C. McCrea  
JAMES McCREA & ASSOCIATES LLC  
[REDACTED]

---

**From:** McCrea, Jim [REDACTED]  
**Sent:** Thursday, June 24, 2010 7:26 PM  
**To:** jimmccrea@ [REDACTED]  
**Subject:** FW: Meeting Schedule

---

**From:** Ian Samuels [REDACTED]  
**Sent:** Thursday, June 24, 2010 7:25:29 PM  
**To:** McCrea, Jim  
**Cc:** Frantz, David; Gary Burner [REDACTED]; Paula Farrell [REDACTED]  
Judson Jaffe [REDACTED]; Jeff Foster [REDACTED]  
**Subject:** RE: Meeting Schedule  
Auto forwarded by a Rule  
Jim -

Thank you for the email. I'd propose the following:

1. Scheduling the Abound briefing at a time and place that is convenient for Paula and Gary.

[REDACTED]

2. For the first 20 minutes of that briefing, have you provide an introduction and briefly walk through the following guidelines that were provided in regards to:
  - a. 1603
  - b. Those that were laid out on the second page of the tax equity guidelines provided to the NEC working group
3. Discuss policy review process going forward, including laying out a timeline (that includes discussions next week)

I would note that we view the discussion of outstanding policy issues, outside of the transaction review process, as a key part of our consultative role. Accordingly, we must engage in a discussion on these important issues in the near term, and look forward to doing so.

Additionally, we are looking forward to receiving the one-pagers and the description of the USG warrants.

Let me know if you have any questions or comments.

Thanks,  
Ian

SENSITIVE / PRE-DECISIONAL

Ian Samuels  
Department of the Treasury | Domestic Finance  
[REDACTED]

-----Original Message-----

From: McCrea, Jim [mailto:Jim.McCrea@Hq.Doe.Gov]  
Sent: Thursday, June 24, 2010 5:34 PM  
To: Samuels, Ian  
Cc: Frantz, David  
Subject: Meeting Schedule

Ian --

In light of the transaction pressure under which we are all now operating as we discussed in the call, Dave and I were thinking that it might make sense to do an Abound briefing tomorrow afternoon and move the guideline discussion to next week. Would Treasury/FFB be available for an Abound discussion any time from 1:30 on tomorrow?

Given the sensitivities, I am just sending this to you.

Jim

James C. McCrea  
Senior Credit Advisor  
Loan Programs  
U.S. Department of Energy  
[REDACTED]

[REDACTED]

# **EXHIBIT 15**

**From:** James C McCrea [REDACTED]  
**Sent:** Thursday, September 9, 2010 1:18 AM (GMT)  
**To:** 'boakley@[REDACTED]  
**Subject:** Shepherds Flat

---

Could not get Doug and Dave to agree to go to OMB tomorrow without Roger and Lew Robertson since they were only available by phone. I told them that if we tried to push OMB to deliver to support a CRB, this unwillingness would be thrown back at us. Still could not budge them. No real sense of urgency. Pretty amazing. Jonathan was a bit unhappy that we did not go on Thurs but understands exactly why.

Pressure is on real heavy on SF due to interest from VP.

Also, remind me to tell you about Treasury when we talk. Changes over there that are helpful.

Jim

---

James C. McCrea  
**JAMES McCREA & ASSOCIATES LLC**

[REDACTED]

JM\_00067515



# **EXHIBIT 16**

**From:** James C McCrea [REDACTED]  
**Sent:** Tuesday, May 25, 2010 10:14 PM (GMT)  
**To:** 'Fridell, Monique' [REDACTED]; 'Heimert, Kimberly' [REDACTED]; 'Duong, Hai' [REDACTED]; 'john.ashburne@[REDACTED]'; 'Sandra Claghorn' [REDACTED]  
**Subject:** RE: late breaking news

---

Monique --

I absolutely love the expression "pineapple" as it is so fitting. I have been trying for days to identify the objects surrounding me and I could not think of the name. Now I know!!! See you on the other one as well.

Jim

---

James C. McCrea  
JAMES McCREA & ASSOCIATES LLC



-----Original Message-----

**From:** Fridell, Monique [REDACTED]  
**Sent:** Tuesday, May 25, 2010 5:55 PM  
**To:** Heimert, Kimberly; Duong, Hai; john.ashburne@[REDACTED]; 'Sandra Claghorn'  
**Cc:** Jim McCrea  
**Subject:** late breaking news

Team,

As of this afternoon, DOE has made political commitment to get Unistar through approval process by 6/15. This means I'll have to dedicate myself pretty much entirely to that deal to meet interim and final milestone. I will need your help in assuming most of the responsibility to get FW through closing OMB process. Hai and John, I will need you to help out Kimberly and Sandy in every financial way possible. Please keep me in the loop but basically I cannot do much at all for the next few weeks.

Sorry to leave you with this "pineapple" (expression in Brazil for a prickly problem)  
Monique

JM\_00076831

# **EXHIBIT 17**

**From:** James C McCrea [REDACTED]  
**Sent:** Tuesday, June 1, 2010 5:31 PM (GMT)  
**To:** 'Fridell, Monique' [REDACTED]; 'Paul Ameer' [REDACTED]; 'reneesass@[REDACTED]'; 'StewartJulie@[REDACTED]'; 'boakley@[REDACTED]';  
**Cc:** 'Frantz, David' [REDACTED]  
**Subject:** UniStar Schedule

---

Just came down from the Secretary's office. He is adamant that this transaction is going to OMB by the end of day Fri if not sooner. Not a way to do things but a direct order.

Jim

---

James C. McCrea  
JAMES McCREA & ASSOCIATES LLC

[REDACTED]

JM\_00076530

# **EXHIBIT 18**

**From:** James C McCrea [REDACTED]  
**Sent:** Saturday, December 5, 2009 3:34 AM (GMT)  
**To:** 'barbiar' [REDACTED]  
**Subject:** Next Week and Please Call

---

Paul --

What a day. Memo got done and went upstairs. There is other significant news from here today so we definitely need to talk over the weekend.

I am on an 8am flight down on Mon morning given everything that is going on. Roger is likely on the same flight. You can make a decision once we talk.

The following is text from an e-mail I sent Kelly this evening that I thought that you might want to think about given the BrightSource events today.

The situation may be volatile. I knew that Reid was having serious issues as I keep an eye on the political situation nationally in spite of generally not talking about it. I was doing my normal daily check on things and not looking for Reid when I found the following posted today:

Senate Majority Leader is already facing an uphill climb as he attempts force health care reform through an irascible Senate in Washington. But a new poll shows that fight could be nothing compared to what he faces back home in Nevada. In a new Mason-Dixon poll of Nevada voters out today, Reid has just a 38% approval rating -- and is losing in a hypothetical matchup with both of the leading contenders for the Republican nomination.

It's not news that Reid is facing a tough reelection battle. But the new poll today shows he's made very little progress in regaining the trust of his constituents after weeks of trying.

The August Mason-Dixon poll, out in August, showed him with a 37% approval rating. In response to numbers like that, Reid launched what the Las Vegas Review-Journal called a "promotional bombardment" featuring TV ads and other outreach. That effort appears to have not done the job.

That may put recent events in a different perspective, both in terms of how Reid will handle this as well as how the WH might respond to him given the circumstances and their respective agendas.

There may be larger considerations. However, if those truly come into play, there may be an ability to move several transactions with political issues simultaneously, allowing LGPO to finish the year with a trifecta!

Since this is not going into the DOE, and just to be clear, the translation is: Reid may be desperate. WH may want to help. Short term considerations may be more important than longer term considerations and what's a billion anyhow? If it has to go down that way anyhow, maybe AREVA can be moved at the same time allowing for a trifecta including Vogtle and allowing for a dramatic advancement of the cause of getting on the boards.

I ended up at the Embassy Suites again for Fri night. I am northbound on the 9am Acela Saturday morning to Stamford. I am up tonight until about 11:30. Talk whenever.

Jim

---

James C. McCrea  
**JAMES MCCREA & ASSOCIATES LLC**

[REDACTED]

JM\_00123362

# **EXHIBIT 19**

**From:** James C McCrea [REDACTED]  
**Sent:** Tuesday, May 25, 2010 6:24 PM (GMT)  
**To:** 'Julie Stewart' [REDACTED]; 'Renee Sass' [REDACTED]  
**Subject:** RE: UniStar

---

Don't really know what all this will mean other than life will be crazy. Have to wait for the dust to settle a little bit.

Jim

---

James C. McCrea  
JAMES McCREA & ASSOCIATES LLC  
[REDACTED]

---

**From:** Julie Stewart [REDACTED]  
**Sent:** Tuesday, May 25, 2010 2:22 PM  
**To:** James C McCrea; 'Renee Sass'  
**Subject:** Re: UniStar

Thanks for the heads' up.... with this acceleration will AES stay on the same schedule as outlined earlier?

Julie Stewart  
Stewart Energy Consultants LLC [REDACTED]  
[REDACTED]

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At 02:01 PM 5/25/2010, James C McCrea wrote:

Gas pedal on this transaction just got tromped upon. 7<sup>th</sup> floor has decided mid June CRB. Not sure what that means nor do I think it will get through, even on the 7<sup>th</sup> floor. It has fallen to me to tell Monique and I am looking for her now but she is in a meeting. More details as this develops. However there has been a commitment from S1 to Steny Hoyer on this. Nothing like over committing and under delivering. Close hold for now but you needed to know.

Jim

---

James C. McCrea  
JAMES McCREA & ASSOCIATES LLC  
[REDACTED]

JM\_00076849



# **EXHIBIT 20**

---

**From:** John Woolard  
**Sent:** Thursday, November 11, 2010 2:37 AM  
**To:** [REDACTED] <[REDACTED]@hq.doe.gov>  
**Cc:** Kris Courtney  
**Subject:** Re: tomorrow morning

Great - thanks again - look forward to catching up tomorrow. JW

---

**From:** Silver, Jonathan <[REDACTED]@hq.doe.gov>  
**To:** John Woolard  
**Cc:** Kris Courtney  
**Sent:** Wed Nov 10 18:17:51 2010  
**Subject:** Re: tomorrow morning

You may not have gotten my other email.  
Address is [REDACTED] in Georgetown.  
Came anytime. Guest bedroom is ready.

I'll be back from my breakfast at 9:30.

Jonathan Silver  
Executive Director  
Loan Programs  
U.S. Department of Energy

---

**From:** John Woolard <[REDACTED]>  
**To:** Silver, Jonathan  
**Cc:** Kris Courtney <[REDACTED]>  
**Sent:** Wed Nov 10 21:13:05 2010  
**Subject:** tomorrow morning

Jonathan – Thanks for offering to meet at your house tomorrow morning. It looks like I land at Dulles at 7:20am – can you please send your address or let me know if it works out better for me to just land and grab a hotel for run/shower and meet later?

I truly appreciate your offer, and am fine either way. My “pre-meeting” is at 11:30 at the Hay Adams hotel. Regards,  
John

John Woolard / President, CEO / BrightSource Energy / [REDACTED]  
[REDACTED]

# **EXHIBIT 21**

## Obama Fundraisers Tied to Green Firms That Got Federal Cash

By MATTHEW MOSK and RONNIE GREENE ABC NEWS and iWATCH NEWS  
Sept. 29, 2011 —

abcnews.go.com

abcnews.go.com



'Bundler' Steve Spinner Worked for Energy Dept. As It Dispensed Millions

Several of Barack Obama's top campaign supporters went from soliciting political contributions to working from within the Energy Department as it showered billions in taxpayer-backed stimulus money on [alternative energy firms](#), ABC News and iWatch News have learned.

One of them was Steven J. Spinner, a high-tech consultant and energy investor who raised at least \$500,000 for the candidate. He became one of Energy Secretary Steven Chu's key loan program advisors while his wife's law firm represented a number of companies that had applied for loans.

Recovery Act records show Allison Spinner's law firm, Wilson Sonsini Goodrich & Rosati, received \$2.4 million in federal funds for legal fees related to the \$535 million Energy Department loan guarantee to Solyndra, a solar company whose financial meltdown has prompted multiple investigations. She pledged to take no portion of the money and did not work on the loan applications.

As House Republicans step up their probe of the Obama administration's green-energy loan program in the wake of Solyndra's bankruptcy, a key focus -- and open question -- is whether [the president's political supporters](#) had any hand in influencing which companies received the taxpayer support.

"There is great concern over political influence contaminating the DOE loan guarantee program," said Rep. Cliff Stearns (R-Fla), who chairs the House Energy and Commerce Committee's Oversight and Investigations Subcommittee. "The prevalence of fundraisers and bundlers scattered throughout DOE is cause for alarm and is a subject our investigation does not take lightly -- we are looking into this and will see where it leads us."

The administration has repeatedly said that politics has played no role in deciding which companies received federal loans.

Spinner declined requests to be interviewed. But representatives for Spinner, his wife, and for the Energy Department all told ABC News and iWatch News that Spinner and his wife took elaborate steps to avoid conflicts between his government work and her legal work. Spinner obtained a waiver that promised he would not work on cases involving clients of his wife's firm. And she pledged not to take proceeds from her firm's work with companies that had applied for loans.

Damien LaVera, an Energy Department spokesman, described Spinner as someone who had "no role" in evaluating loan applications or selecting recipients.

Spinner described his job differently. He wrote in an online bio for the Center for American Progress, the left-leaning think tank he joined after leaving the administration, that he "helped oversee the more than \$100 billion of loan guarantee and direct lending authority" for the department's green-energy loan program. And in a speech at a "Green Tech" conference in June 2010, Spinner described how he "worked very, very closely with all the various organizations, the various offices, in trying to streamline operations and ... move the funding opportunity announcements out, get the solicitations out on the street."

"What the Secretary really cared about was he wanted us to get the money out fast, he wanted us to pick and select fantastic projects," Spinner said.



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Spinner  
was  
not  
the  
only  
Obama  
political  
supporter  
to

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play a role at the Energy Department. California venture capitalist Steve Westly, who raised more than \$500,000 for Obama, had Secretary Chu's ear on green energy issues as a member of a high-level volunteer advisory panel. Mackey Dykes, who was a finance manager for the Obama campaign, was hired to be the liaison between the Energy Department and White House. Each declined interview requests.

Obama's political supporters were also investors in companies that had applied for loans. Westly has held stakes in at least five companies that have won DOE support. Oklahoma billionaire George Kaiser, another Obama bundler, was the biggest private backer of Solyndra. Westly, Spinner and the CEO of Allison Spinner's law firm, John V. Roos, (now Obama's ambassador to Japan), each raised more than \$500,000 for Obama's 2008 campaign.

#### Watchdog: Unusual for Donor To Get Federal Loan Job

While it is common for presidents to reward top donors with ambassadorships or other political posts, the Sunlight Foundation's Bill Allison said it is unusual to see a major donor such as Spinner given a position inside a relatively obscure government loan program.

"For an administration that won't hire lobbyists to be hiring fundraisers for that role, that seems to be a bit of a contradiction," Allison said. "Obviously you want to keep all people who are involved in political influence out of positions of responsibility." As a presidential candidate, Obama had said lobbyists "won't find a job in my White House," but then dialed that back to "won't dominate [my White House]."

The Energy Department said Spinner brought experience working with startup companies -- the type of firms lining up for green-energy funding intended to aid the environment and economy.

"Spinner is a Harvard MBA and an experienced business executive with more than 15 years advising innovative start-up companies in the technology, media and retail industries. He advised over 50 start-up companies over the last 10 years," DOE's LaVera wrote.

Both Spinner and Westly were among a California contingent of green-energy executives who put their money, and energy, behind Obama.

When President Obama won the White House in 2008, Spinner was one of several Silicon Valley executives to help vault him to victory. Spinner was one of just 52 fundraisers to raise more than half a million dollars for the president. He served the Obama-Biden Presidential Transition Team, focused on technology innovation and government reform.

In February 2009, San Francisco Magazine quoted several local Obama backers reflecting on the campaign. "In May, about 120 of us had an Entrepreneurs for Obama video teleconference with Barack. Afterward, Steve Westly and some other senior Silicon Valley executives stayed and put forth their ideas on tech issues and initiatives and the campaign," Spinner was quoted as saying. "I really loved that I could help differentiate this campaign's technology from any others in history. I knew most of the venture capitalists and entrepreneurs, and if there was something good, I could bubble it up to the campaign."

In April 2009, Spinner joined a Department of Energy poised to unleash billions of dollars, becoming a "small business loan guarantee advisor," a title that later shifted to "loan program advisor," focused on financing start-up green energy firms and cutting-edge car makers. He held the job for 17 months.

The move turned a hearty presidential supporter and frequent energy investor into a DOE insider.

Spinner's financial disclosure forms showed that he was an active investor in energy-related companies. On his final disclosure report signed Oct. 15, 2010, Spinner listed at least 15 purchases and 14 stock sales of energy-related stock earlier that year.

An initial review of financial disclosure records by iWatch News and ABC News showed one investment in an energy firm whose subsidiary received funds from the Energy Department while he was working there, and investments in three others that landed Energy Department support after he sold his stakes. Energy officials said they considered his portfolio small enough to fall "within the Executive Branch-wide de minimis exception for interests in securities."

Spinner reported making \$12,155 from a 2008 investment in Atheros Communications. In June 2010, Atheros announced it would receive up to \$4.5 million in DOE grant funding. DOE said Spinner sold his Atheros stock before joining the department.

On another form, Spinner reported selling off his \$1,001-\$15,000 investment in Air Products & Chemicals Inc. in February of 2010, four months before Air Products announced it landed \$253 million in stimulus funding. "To the best of our knowledge, he had no involvement" with the award, a company official said.

Spinner invested \$1,001-\$15,000 in Exelon. A subsidiary of Exelon was awarded a \$200 million DOE grant in late 2009. A spokeswoman said the company never dealt with Spinner as their grant was being considered.

His wife's role in a law firm representing corporate clients seeking federal funds prompted Energy Department ethics officials to take a close look, according to documents obtained under the Freedom of Information Act. The law firm, Wilson Sonsini Goodrich & Rosati, has represented several companies that had applied for Energy Department loans and loan guarantees.

On August 18, 2009, four months into his tenure at DOE, Spinner received an ethics opinion involving that connection. Matt Rogers, then the senior advisor to the Energy Secretary, wrote that Spinner could continue in his duties, but "not participate in any discussion regarding any application involving Wilson [Sonsini]." The opinion said his wife would forgo pay "earned as a result of its representation of applicants in programs within your official duties."

Rogers said Spinner's conflict was minimized because his role at DOE was supervisory -- "to embrace strategic objectives, inquire on overall progress of applications to the program staff, anticipate and help senior management clear any institutional roadblocks to accomplishment of the program's objectives."

Spinner's Wife's Firm Worked for Solyndra



Courtney Dorman, a spokeswoman for Allison Spinner's law firm, Wilson Sonsini, said the firm also took strides to avoid conflicts, establishing a wall between her and client matters involving the Energy Department while Spinner was in office.

One of those law-firm clients, SEC records show, was Solyndra -- the California solar panel firm whose collapse put half a billion dollars of taxpayer money at risk and prompted an investigation by the FBI and other agencies.

[WATCH the Original ABC News Report on Solyndra](#)

[READ the Original ABC News Report on Solyndra](#) The law firm worked on the solar company's failed public offering, the records show. And it also provided Solyndra with outside counsel on the DOE loan guarantee transaction. The company was paid \$2.44 million for its Solyndra work, records show -- money generated by the Energy Department's stimulus loan guarantee to the solar panel firm.

Allison Spinner "was not involved with that transaction, nor has she ever worked with Solyndra in any capacity," Dorman said.

The law firm's website cites Allison Spinner's work with other clean-tech firms -- including Amyris Inc. and HCL CleanTech. Both companies had engaged in the time-consuming process of applying for green energy grants. Amyris Biotechnologies won \$25 million from DOE in late 2009 to develop a diesel substitute and went public the next year -- with Spinner's wife helping handle the IPO. After Spinner left the department, HCL CleanTech landed a \$9 million Energy Department grant to convert biomass feedstocks into fuel and chemical products.


Dorman, the firm spokeswoman, said in an email that Wilson Sonsini "established an ethical wall around Allison with respect to [Wilson Sonsini] representation of clients in matters involving DOE loan programs." Dorman added that Allison Spinner represented "clients who had DOE loans or grants that fell outside of Steve's jurisdiction."

Steven Spinner was not with the department when Solyndra won a conditional commitment for the loan guarantee in March 2009. But he was on board when the loan closed that September. A few days later, at a clean-tech forum in Boston in September 2009, Spinner spoke of the virtue of the DOE's support.

"We liked the taste of it," he said, telling the Boston group the company would bring thousands of jobs.

After leaving the department last September, Spinner has continued to cheerlead for its mission. This July, he co-authored an article for the Center for American Progress titled "Don't Let Clean Energy Funding Die on the Vine." The House committee's investigation of the Solyndra financing was just heating up.

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"This 'embattled' program has by all business metrics proven an outright success," he wrote. "Even the most controversial loan guarantee recipient -- Solyndra, a solar manufacturer -- is seeing an operational turnaround."

Little more than a month later, Solyndra fired 1,100 workers and filed for bankruptcy.

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