

# U. S. Department of Energy

## National Laboratory Network Notice of Opportunity

### Small Business Vouchers (SBV) Request for Assistance (RFA)



#### A. Overview

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The U.S. Department of Energy's (DOE) enterprise of National Laboratories is an innovation powerhouse full of unique and advanced instruments as well as world class scientists, engineers and other professionals. The Small Business Vouchers (SBV) Pilot is a mechanism structured to allow small businesses engaged in the renewable energy and the energy efficiency sectors greater access to the vast capabilities and resources that exist at the DOE National Laboratories.

Through the SBV Pilot, eligible small businesses can tap into the reserve of National Laboratory intellectual and technical assets to overcome critical technology and commercialization challenges such as:

- Prototyping
- Materials characterization
- High performance computations
- Modeling and simulations
- Intermediate scaling to generate samples for potential customers
- Validation of technology performance
- Designing new ways to satisfy regulatory compliance

#### B. Eligibility Requirements and Certifications

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##### Eligible Requestor

An eligible requester is a small business that (1) is organized for-profit; (2) has less than 500 employees; (3) is majority (51%) owned by a U.S. citizen or lawfully admitted permanent resident alien, U.S. owned small businesses, or U.S. based venture capital, hedge fund or private equity companies; (4) is organized according to the laws of any of the 50 states, the District of Columbia, or any US territory or possession; and (5) operates primarily within the U.S.

##### Company Certifications

Requestors must certify that they will accept the SBV Agreements without modification, that they will provide the required 20% cost share upon selection for a voucher, and that they agree to report data for five (5) years from voucher project commencement. Details on SBV Agreements can be found in Section C of this document. Further details on data reporting and cost share requirements can be found in Sections F and G, respectively.

## Eligible Types of Assistance

Eligible types of assistance from National Laboratories are limited to providing the unique capabilities and facilities of the DOE National Laboratory network. Vouchers cannot be used at National Laboratories to obtain services or use of equipment that is readily available in the private sector.

## Eligible Technical Areas for Small Business Vouchers Requests for Assistance

- 1) Advanced Manufacturing
- 2) Bioenergy Technologies
- 3) Building Technologies
- 4) Fuel Cell Technologies
- 5) Geothermal Technologies
- 6) Solar Energy Technologies
- 7) Vehicle Technologies
- 8) Water Power Technologies
- 9) Wind Energy Technologies

## Technical Resources for Small Businesses

To encourage clean technology small businesses and entrepreneurs who have never had a relationship with either the Department of Energy or a National Laboratory, the Small Business Voucher's Pilot offers these resources to RFA submitters. These may serve as a valuable resource to applicants who seek to align their request with the priorities of the Technology Offices.

- 1) Advanced Manufacturing Office (AMO)
  - Advanced Manufacturing Office Background: <http://energy.gov/eere/amo/advanced-manufacturing-office> and the peer review docs <http://energy.gov/eere/amo/downloads/amo-peer-review-june-14-15-2016>
- 2) Building Technologies Office (BTO)
  - 2016 – 2020 Multi-year Program Plan (MYPP) <http://energy.gov/eere/buildings/downloads/multi-year-program-plan>
  - 2016 BTO Peer Review <http://energy.gov/eere/buildings/building-technologies-office-2016-peer-review>
- 3) Bioenergy Technologies Office (BETO)
  - 2015 Multi-year Program Plan (MYPP) <http://www.energy.gov/eere/bioenergy/downloads/bioenergy-technologies-office-multi-year-program-plan-march-2015-update>
  - 2016 update sections to MYPP: <http://www.energy.gov/eere/bioenergy/downloads/bioenergy-technologies-office-multi-year-program-plan-march-2016-sections>
  - 2015 Project Peer Review for Bioenergy <http://www.energy.gov/eere/bioenergy/2015-project-peer-review>
- 4) Fuel Cell Technology Office (FCTO)
  - Multi-Year Research, Development and Demonstration Plan <http://www.energy.gov/eere/fuelcells/downloads/fuel-cell-technologies-office-multi-year-research-development-and-22>
  - FCTO Annual Merit Review <http://www.annualmeritreview.energy.gov/>

- 5) Geothermal Technologies Office (GTO)
  - GTO Homepage: <http://energy.gov/eere/geothermal/geothermal-energy-us-department-energy>
  - 2015 Annual Report GTO <http://www.energy.gov/eere/geothermal/downloads/2015-annual-report-geothermal-technologies-office>
  - 2015 GTO Project Peer Review  
<http://www.energy.gov/eere/geothermal/downloads/2015-peer-review-report-geothermal-technologies-office>
- 6) Solar Energy Technologies Office (SETO)
  - SunShot Initiative: <http://energy.gov/eere/sunshot/about-sunshot-initiative>
- 7) Vehicle Technologies Office (VTO)
  - 2016 Annual Peer Review <http://energy.gov/eere/vehicles/vehicle-technologies-office-annual-merit-review-and-peer-evaluation>
  - VTO Planning and Implementation Roadmaps  
<http://www.energy.gov/eere/vehicles/vehicle-technologies-office-plans-implementation-and-results>
  - A little more VTO information here  
[http://energy.gov/sites/prod/files/2016/06/f32/es108\\_duong\\_2016\\_o\\_web.pdf](http://energy.gov/sites/prod/files/2016/06/f32/es108_duong_2016_o_web.pdf)
- 8) Water Power Program
  - Water Power Program: <http://energy.gov/eere/water/water-power-program>
- 9) Wind Program
  - Wind Technology Office: <http://energy.gov/eere/wind/wind-program>

## C. Voucher Details

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### Funding

Vouchers support small businesses by providing funding to DOE National Laboratory staff to help small businesses overcome critical technology and commercialization challenges. Vouchers are not financial awards made to small businesses.

Vouchers will be issued in up to two rounds between October 2016 and October 2017. Funding is not guaranteed to be fully allocated. Table 1, below, shows the funding available for rounds three and four.

### Voucher Period of Performance

Vouchers are valid for up to 12 months from the date the agreement is executed. Exceptions may be granted if lab staff is not available to begin right away.

### Voucher Terms and Conditions

All voucher recipients will sign one of two standard, non-negotiable agreements. Small businesses may engage with National Laboratories on collaborative research and development (R&D) that may result in the development of intellectual property (IP). In that case, a collaborative research and development agreement ([CRADA](#)) may be the most appropriate contractual vehicle.

Alternatively, Small Business Vouchers may be awarded to requesters who do not anticipate the development of intellectual property, and in those cases the Technical Assistance Pilot

Agreement ([TAPA](#)) may be the more appropriate agreement. Products embodying intellectual property developed under SBV assistance must be substantially manufactured in the United States. Please refer to the specific agreements above for further details. Small Businesses will work with Lab Contracting Officers to determine the appropriate agreement.

The U.S. DOE and its enterprise of National Laboratories are committed to accelerating the speed at which we are able to review, select and start Voucher work. As such, we cannot allow for negotiation of the terms and conditions in the linked agreements.

**Table 1: Voucher Funding\* by Technology Area**

Technology	Technology Sub-area	Available funding
<b>Vehicle Technologies</b>	Advanced Vehicle batteries	\$3,313,000
	Electric Drive Systems	
	Advanced Combustion	
	Emissions Control Systems	
	Fuels and Lubricants	
	Lightweight materials	
	Propulsion materials	
	Energy efficient mobility	
<b>Fuel Cell Technologies</b>	Fuel Cell R&D	\$403,000
	Hydrogen Production and Delivery	\$295,000
	Hydrogen Storage	\$177,000
	Manufacturing R&D	\$79,000
	Safety, Codes and Standards	\$30,000
<b>Bioenergy Technologies</b>	Biomass Conversion Technologies	\$828,000
	Biorefinery Technologies	\$500,000
	R&D Analysis and Sustainability	\$85,000
	Algal Feedstocks	\$208,000
	Feedstock Infrastructure	\$100,000
<b>Advanced Manufacturing</b>	Next Generation Manufacturing	\$2,744,000
<b>Building Technologies</b>	Lighting R&D	\$202,000
	Space Conditioning and Refrigeration	\$202,000
	Building Materials and Envelope	\$202,000
	Analysis Tools	\$202,000
	Distributed Energy Resources	\$202,000
	Sensors and Controls	\$202,000
<b>Solar Energy Technologies</b>	Solar Technology and Manufacturing**	\$811,000
<b>Geothermal Energy Technologies</b>	Enhanced Geothermal Systems	\$364,000
	Hydrothermal Energy	\$81,000
	Low-Temperature Geothermal	\$45,000
	Geothermal Systems Analysis	\$295,000
<b>Water Power Technologies</b>	Hydropower Technologies	\$360,000
	Marine Hydrokinetic Technologies	\$325,000
<b>Wind Power Technologies</b>	Wind Power R&D	\$298,000

\*Note that funding is not guaranteed to carry over into subsequent SBV rounds

\*\*Solar Technology areas include photovoltaics, concentrated solar, systems integration, and softs costs

## D. Key Dates and Timeline

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Between October 2016 and October 2017, up to two rounds will be issued under the Small Business Vouchers Pilot. All rounds will follow a similar timeline and vouchers will be available for use for up to 12 months after businesses execute an agreement with a national laboratory.

### Round Three Timeline

- October 10, 2016 - Round 3 Request for Assistance (RFA) Opens
- November 14, 2016 - Round 3 RFA submission closes, 11:59 PM Eastern Standard Time
- Mid-Late January, 2017 - Notification of semi-finalist selections
- Late January-Early February 2017 - Semi-finalists work with lab staff on statement of work
- Mid-Late February, 2017 - Finalists notified for final award negotiation
- March 2017- SBV work can begin

## E. Merit Review Criteria

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Requests for assistance will be evaluated in accordance with the following criteria:

### 1. Potential for Impact (33%)

#### *Mission*

- Extent to which solving the stated problem will enable the achievement of the goals as described in “Technology Areas” section of the Notice of Opportunity.

#### *Innovation*

- Extent to which solving the stated problem represents a significant market improvement with respect to existing commercial products or solutions.

#### *Market Impact*

- Extent to which solving the stated problem will lead to a commercially successful product and company.
- Adequacy, specificity, and reasonableness of the stated commercial impacts of solving the stated problem and the degree to which it convincingly conveys how the applicant will move the current state to the proposed advancement.
- Extent to which solving the stated problem will result in either a product or solution that transforms or replaces existing industry approaches or a new product or solution that can be widely used by the existing industry and represents a significant improvement of industry approaches (an improvement leveraged across the entire industry can be as valuable as a new transformational standalone product).

## 2. Problem Definition (33%)

### *Problem Identification*

- Extent to which applicant discusses and demonstrates understanding of the key technical and commercial challenges involved in the proposed work.

### *Quality and Reasonableness*

- Extent to which the requester states a valid technical issue which can reasonably be solved within the budget and scope of this program.

## 3. Team and Resources (33%)

### *Capabilities*

- The extent to which the capability of the proposed requester's team, can address the relevant aspects of the proposed project with a good chance of success, including, but not limited to, qualifications, relevant expertise, and time commitment of the individuals on the team.

### *Resources*

- Ability of the requester to support the proposed work.

## 4. Program Policy Factors

In addition to the review criteria listed above, the following program policy factor may be considered in determining whether an RFA is selected:

- *Opportunity to assist or collaborate with a small business with little to no experience working with a DOE National Laboratory.*

## F. Reporting Requirements

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The U.S. Department of Energy has contracted with a third-party evaluator for the purposes of assessing the effectiveness of the Small Business Vouchers Pilot. The third-party evaluator will request information from small business voucher recipients annually for five (5) years after voucher commencement. Voucher recipients are expected to complete a web survey necessitating no more than 30 minutes of the respondent's time each year. The survey questions will seek information from respondents such as: satisfaction with pilot participation processes and pilot services received; interest in subsequent lab assistance; technology development status; commercialization advancements; intellectual property created; follow-on funding attained; and product sales, if any. Time and cost incurred to comply with these reporting requirements can be included in a requester's cost share contribution.

## G. Cost Share

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Requestors will be required to provide 20% cost share of the total project cost if awarded (i.e. cost share divided by cost share plus voucher amount must be great than 20%). Requestors will be required to

provide detail about how it will meet the 20% cost share requirement upon selection for award. Every cost share contribution must be allowable under the applicable Federal cost principles. In addition, cost share must be verifiable upon submission of the Full Application.

Requesters may provide cost share in the form of cash or in-kind contributions. Allowable in-kind contributions include, but are not limited to: personnel costs, indirect costs, facilities and administrative costs, rental value of buildings or equipment, and the value of a service, other resource, or third party in-kind contribution. Requesters are allowed to estimate the cost to provide metrics data about the SBV for 5 years to the U.S. Department of Energy.

Project teams may use funding or property received from state or local governments to meet the cost share requirement, so long as the funding was not provided to the state or local government by the Federal Government.

The Prime Recipient may not use the following sources to meet its cost share obligations including, but not limited to: revenues or royalties from the prospective operation of an activity beyond the project period; proceeds from the prospective sale of an asset of an activity; federal funding or property (e.g., Federal grants, equipment owned by the Federal Government); or expenditures that were reimbursed under a separate Federal Technology Office. For example, Small Business Innovation Research (SBIR) /Small Business Technology Transfer (STTR) funding cannot be used to provide in-kind or direct cost share. Small businesses with SBIR/STTR funding can make a request for assistance under the Small Business Vouchers Pilot, but the scope of work must be distinct from existing SBIR/STTR projects.

Requestors may not use the same cash or in-kind contributions to meet cost share requirements for more than one project or program. For more information on allowable cost share, please refer to the Federal Acquisition Regulations (FAR) Part 31 at <http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm>.

In addition, independent research and development (IR&D) funds are allowable as an indirect cost expense to the extent that the costs are allocable and reasonable. Please refer to FAR 31.205-18 for guidance on IR&D cost share.

## **H. Submitting a Request for Assistance (RFA)**

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***NOTE: For Small Businesses that have applied to the SBV Program previously, the submission process for the Requests for Assistance is new, and utilizes the DOE On-line Application System; EERE Exchange. Please follow the instructions below.***

The SBV Program is now utilizing the Office of Energy Efficiency and Renewable Energy's Funding Opportunity Exchange (EERE Exchange) online platform for accepting Requests for Assistance. Please follow these steps when preparing your RFA:

- Step 1**      Confirm your eligibility and view the Request for Assistance on the [sbv.org](http://sbv.org) website.
- Step 2**      Visit [EERE Exchange](#) and create a login by hitting Register on the left navigation bar (or log into your existing Exchange account)

- Step 3** Carefully review the SBV Round 3 Notice of Opportunity DE-SBV-0000999 Request for Assistance on EERE Exchange
- Step 4** Review required documents and prepare your request for assistance (instructions are located in Section I of this Notice of Opportunity; a template is available on the [EERE Exchange](#) website)
- Step 5** Fill out the online submission form and upload your request as per the instructions in the Request for Assistance.
- Step 6** Hit the submit button on the EERE Exchange submission page (you will receive an automated message confirming your submission)

**Tips for Using EERE-Exchange:**

- All available EERE Funding Opportunity Announcements (FOA), Notice of Intent to Publish (NOI) and Requests for Information (RFI) are listed in the table on the top of the EERE-Exchange website.
- You cannot apply to the RFA without being registered and logging into the EERE Exchange system.
- When on Exchange, you will need to find the SBV Round 3 RFA on the table of open opportunities. The reference number is DE-SBV-0000999.
- When you are logged into the system, and you click on DE-SBV-0000999, you will be able to select “Apply”.
- After clicking Apply, a form will appear. The data that you enter in this form will be saved in your account, and can be accessed at any time by selecting My Submissions from the left navigation bar (NOTE: You will only be able to see the My Submissions selection when you are logged onto the system).

**I. Request for Assistance (RFA): Instructions**

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Applicants must submit three (3) documents for this Request for Assistance. These documents should be uploaded to the EERE Exchange System. The required documents are:

- 1) Request for Assistance (example provided on EERE Exchange)
  - 2) SBV RFA Additional Questions Spreadsheet (Download from EERE Exchange)
  - 3) Summary Slide (example provided on EERE Exchange)
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**1) Request for Assistance (RFA) Application**

Suggested template available on [EERE Exchange](#)



**NOTE:** This template is provided as a convenient method of documenting the information required to process this Request for Assistance. The use of this template is not required, but the data elements within the template are required.

Requests for Assistance (RFA) are limited to four pages of text. In addition, Graphs, tables, and images must be included in the 4-page RFA. Requesters may also include up to three (3) pages of supporting documentation consisting of resumes for company personnel and/or support letters. Please use 11 point Times New Roman font and 1” margins. Tables and graphics may have smaller font, as long as the information is legible. Please save all pages as one PDF file and save it as “Your Company Name\_SBVpilot” (i.e., Company XYZ\_SBVpilot.PDF). Once all files have been saved, please upload the file as part of your application on the submission page on [EERE Exchange](#).

**Please do not provide any trade secrets, confidential or proprietary information in the Request for Assistance or in supporting documentation (including resumes). The U.S. Government is not liable for the disclosure or use of any information included in the Request for Assistance or in supporting documentation (including resumes).**

### **1. Company Overview**

Describe the mission and vision for your company as it relates to this request for assistance.

- a. What differentiates your company from others in this market?
- b. Discuss the history, successes, and current status of the requester’s product development.
- c. Include relevant, previous work efforts, demonstrated innovations that relate to the request for assistance.

### **2. Problem Definition**

Describe the challenge your company is facing and how this assistance, if granted, will help you overcome that challenge.

- a. Include a high-level discussion introducing the technical challenge the business is facing.
- b. Describe any efforts your company has made to address this technical challenge.
- c. Describe what you envision as a successful solution to this technical challenge. For example, what data, experimental result, or technical service is needed?

### **3. Project Impact**

Describe how this project, if successful, will contribute to one of more of the DOE EERE mission areas.

- a. Quantitatively describe the current “baseline” status of the company’s technology, product, or service to be addressed by this project.
- b. Quantitatively describe the targeted improvement in this baseline.
- c. Quantitatively describe how the company’s technology, product or service compares to

current industry standards. Potential metrics for quantifying the baseline and targeted improvements include the following:

- Cost savings
  - Increased performance
  - New processes or materials
  - New products or markets
  - Reduced greenhouse gas emissions
  - More efficient energy generation
  - Reduced life-cycle or process energy use
  - Increased regulatory acceptance
- d. Include a statement on how solving this problem will lead to market or business success.
- e. Notable metrics may include the following:
- Competitive advantage gained by solving the research challenge
  - Accelerated commercialization timeline
  - Projected increase in company growth in terms of annual sales or revenue, annual job growth, or decrease in cost of goods sold

#### **4. Use of Project Results**

Describe how the results of the proposed assistance will be used to advance the development of your company's products or services and the impact the requested assistance will have on your business and the market.

#### **5. Team**

List the key members of your company's leadership and technical team. Briefly describe their qualifications and experience. Requesters may include up to three (3) pages of resumes and/or support letters combined in addition to this 4-page request.

#### **6. Cost Share**

Describe how your company will provide a minimum of 20% cost share. If providing in-kind cost share, indicate how you plan to contribute to the project.

#### **7. RFA Appendix**

Requesters may include up to three (3) pages of resumes and support letters in an appendix. Resumes and support letters do not count towards the 4-page RFA limit and are limited to three (3) pages total, combined. Additional pages beyond the three (3) will not be reviewed

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## **2) SBV Applicant Information Form**

**NOTE:** This template is provided as a convenient method of documenting the information required to process this Request for Assistance. The use of this template is not required, but the data elements within the template are required.

The SBV Applicant Information Form is an Excel spreadsheet, and is available at EERE Exchange. This form should be filled out in its entirety, saved as an Excel file (.xls). Please use the following naming convention, and upload in the EERE Exchange system.  
“Your Company Name\_SBVpilot\_ApplicantData.xls” (i.e. Company XYZ\_SBVpilot\_ApplicantData.xls)

### 3) SBV Summary Slide

**NOTE:** This template is provided as a convenient method of documenting the information required to process this Request for Assistance. The use of this template is not required, but the data elements within the template are required.

Applicants are required to provide a single PowerPoint slide summarizing the proposed project. A template is provided on EERE Exchange.

The slide must be submitted in Microsoft PowerPoint format. This slide is used during the evaluation process. Please use the following naming convention, and upload in the EERE Exchange system. “Your Company Name\_SBVpilot\_SummSlide.ppt” (i.e., Company XYZ\_SBVpilot\_SummSlide.ppt)

The Summary Slide template requires the following information:

- Name and location of applying small business
- Company summary
- Problem statement
- Picture or chart that summarizes technology development
- Requested DOE National Laboratory
- Potential workshop and deliverables (high level list is satisfactory)
- Technology description and possible impact

## J. Merit Review and Selection Process

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There is a 3-step review process to evaluate the RFAs. First, an external (non-lab) merit review committee will review each RFA and the result of that review will inform which RFAs will continue to the next step in the review process. Second, labs will work with DOE to determine the optimal lab-company match to enter into the semi-finalist review. Semi-finalists will be matched with a lab researcher. The lab and the semi-finalists will have approximately 4 weeks to work to develop a brief statement of work and budget, which will be presented to DOE for consideration. Third, the labs will present the proposed projects to DOE for final review and selection. The DOE Technology Offices will select SBV projects relevant to their technological focus. After selections, the labs will enter into final negotiations with the requesters for the selected projects.

### Anticipated Review and Selection Schedule

- Phase 1: The labs will use an external (non-lab) merit review committee to review each RFA. The results of that review will inform which RFAs the labs will advance to Phase 2.

(November-December)

- Phase 2: Labs will work with DOE to determine the optimal lab-company match to enter into the semi-finalist review phase. Semi-finalists will be notified via email, matched with a lab researcher and have approximately 4 weeks to work with their lab researcher to develop a brief statement of work and budget that will be presented to DOE for consideration. (January)
- Phase 3: The labs will present the semi-finalist projects to DOE. The DOE Technology Offices will select SBV projects and the labs will enter into final award negotiations with the requesters for the selected projects. (February)

## **K. Contact SBV**

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If you have questions about submitting a request for a voucher, please contact [info@sbv.org](mailto:info@sbv.org) or call David Kistin at (505) 205-3598. If you have questions about specific lab capabilities in a technology area, please contact the appropriate technology contact below.

### **Advanced Manufacturing**

Jennifer Palmer  
[sbvpilot@ornl.gov](mailto:sbvpilot@ornl.gov)

### **Bioenergy**

Corinne Drennan  
[Corinne.drennan@pnnl.gov](mailto:Corinne.drennan@pnnl.gov)

### **Buildings**

Dennis Stiles  
[Dennis.stiles@pnnl.gov](mailto:Dennis.stiles@pnnl.gov)

### **Fuel Cells**

Keith Wipke  
[Keith.wipke@nrel.gov](mailto:Keith.wipke@nrel.gov)

### **Geothermal**

David Kistin  
[dkistin@sandia.gov](mailto:dkistin@sandia.gov)

### **Solar**

David Kistin  
[dkistin@sandia.gov](mailto:dkistin@sandia.gov)

### **Vehicles**

Jodi Bellacicco  
[sbv@lbl.gov](mailto:sbv@lbl.gov)

### **Water (MHK)**

Al Livecchi  
[Al.livecchi.sbv@nrel.gov](mailto:Al.livecchi.sbv@nrel.gov)

### **Water (Hydro)**

T.J. Heibel  
[tj.heibel@pnnl.gov](mailto:tj.heibel@pnnl.gov)

### **Wind**

David Kistin  
[dkistin@sandia.gov](mailto:dkistin@sandia.gov)