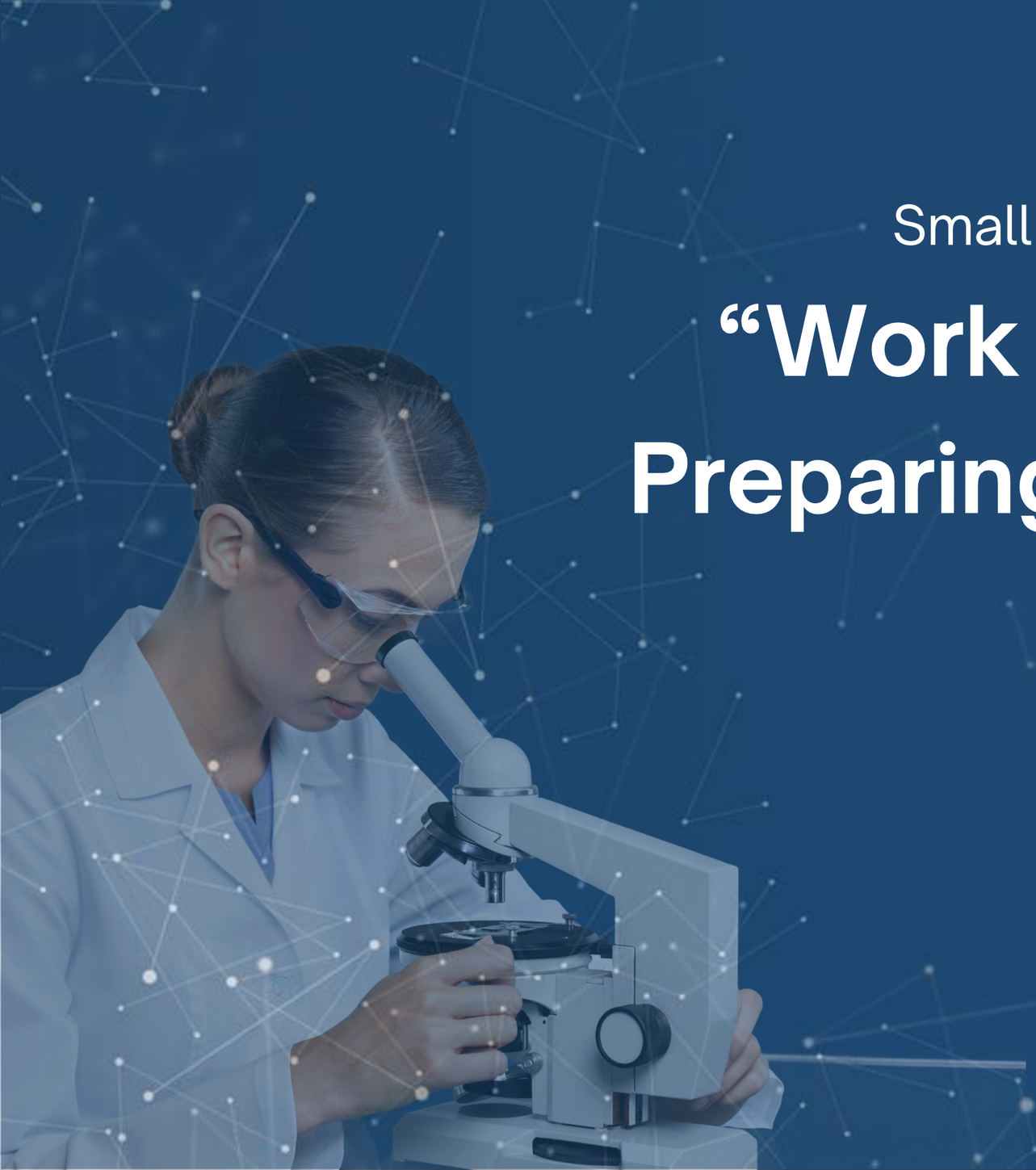

Small Business Innovation Research (SBIR)

“Work and Learn” Session: Preparing the Letter of Intent

December 20, 2023

CLEAN ENERGY BUSINESS NETWORK®

The U.S. Department of Energy (DOE) runs a wide array of commercialization programs that support innovators at various stages of commercialization: from early-stage ideas to manufacturing-ready prototypes and subsequent full-scale demonstrations. Each program has different goals and application processes tailored to different technology readiness and business maturity levels.

In collaboration with the American-Made Program, Power Connectors may support DOE by providing recruitment, outreach, mentorship, and training to help new and existing applicants succeed across the continuum of DOE-funded innovation programs.

SBIR/STTR

The Department of Energy's Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) program provides non-dilutive grants of up to $250k in Phase 1 to help small businesses (and research partners) develop and commercialize novel energy technologies.

Power Connector workshops:

- ***Learn:*** Info session on the SBIR/STTR FOA and LOI process, held by the University of Arizona Center for Innovation on 12.19.23 (we will share recording)
- ***Practice:*** Today's hands-on workshop with the Clean Energy Business Network to get you started with LOI and federal registration systems
- ***Get Support:*** UACI office hours 12.22.23 and 1.2.24

In-depth application assistance:

- Available to first-time DOE SBIR/STTR applicants through Dawnbreaker/Phase 0.

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Key Steps, Terms, and Links

1. **Learn about the current SBIR/STTR funding opportunity:**
   - **Funding Opportunity Announcement (FOA):** Details/rules on the opportunity.
   - **Letter of Intent (LOI):** Pre-application that you are required to submit in early January to determine eligibility.
   - **Topics:** The technologies/projects of interest to DOE – read the list to see if you are a good fit.
   - **Responsive:** What DOE calls a LOI that they deem relevant to the topics of interest.

2. **Get your registrations in order:**
   - **System for Award Management (SAM):** Federal website where you must register to get a **"Unique Entity Identifier (UEI)"** for your organization before submitting the Full Application.
     - It can take a few weeks to receive the UEI, so register now.
     - Be careful of private websites claiming to help you with this for a fee!
     - If asked for a **CAGE Code**, apply for that here (takes about 20 minutes).
     - If you see a place to enter a "**DUNS**," ignore that—you no longer need this as of 2022.
   - **Portfolio Analysis and Management System (PAMS):** DOE website where you will submit the LOI.
     - The UEI is not marked as a mandatory field in PAMS, but many people encounter an error without it.
     - Go ahead and apply for the UEI now, but then see how far you can get in the PAMS registration while you wait, and contact the PAMS Help Desk if you get stuck.
   - **Grants.gov**: Federal website where you will submit the full application (not needed yet for the LOI).

3. **Write the Letter of Intent to be responsive to the topics.**

Quick Poll

This will help us decide how to prioritize our time today.

1. Who is a first-time applicant to DOE's SBIR/STTR?
2. Who is NOT yet registered in the SAM?
3. Who is NOT yet registered in PAMS?

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Letter of Intent Preview

We will go through this step-by-step! Here is just a quick orientation:

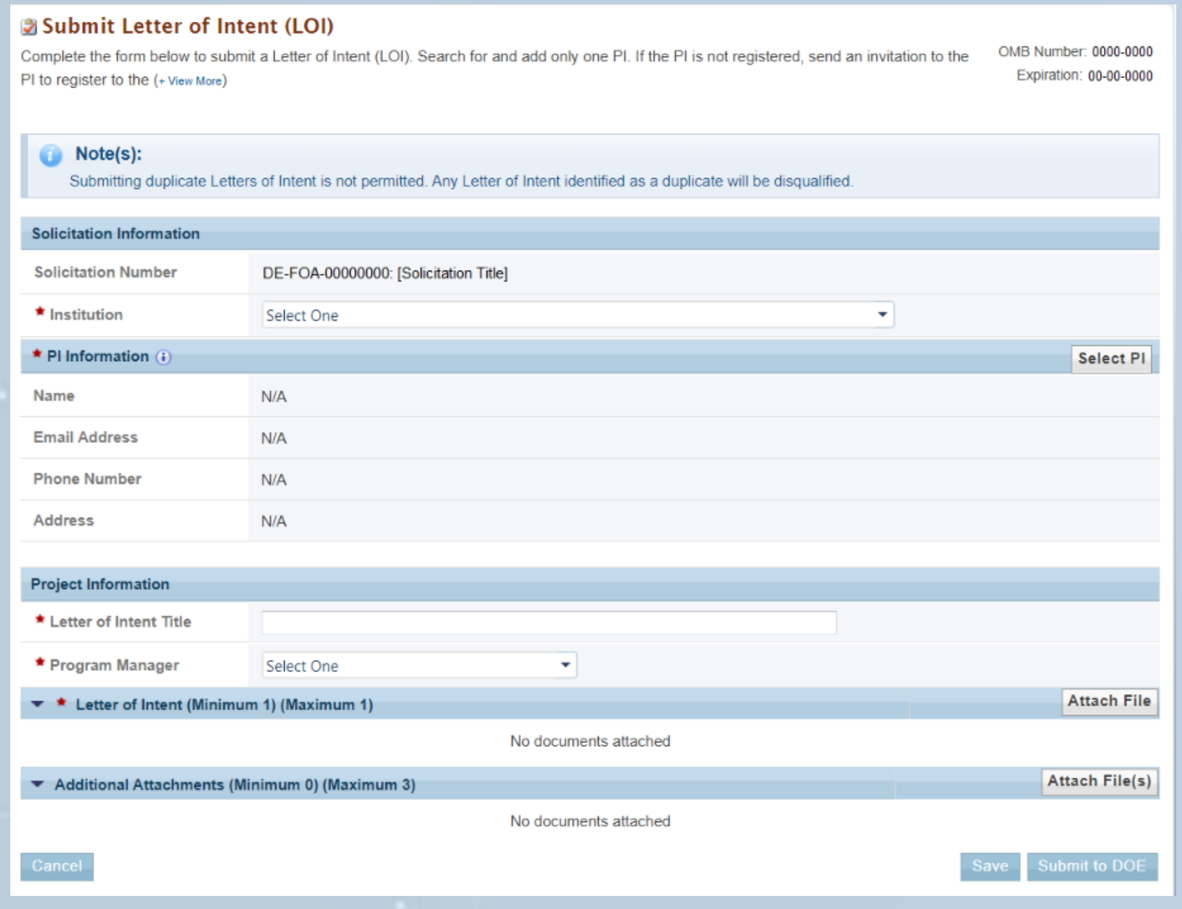
Instructions: LOI Instructions and Templates

Preparing a Letter of Intent (LOI)

When submitting an LOI through the Office of Science Portfolio Analysis and Management System (PAMS), all submitters must provide the following:

- Project Title: A descriptive title of the planned R&D
- Topic Number & Subtopic Letter as provided in the corresponding FOA Topics document (e.g. 13 c)
- Principal Investigator (PI) name and contact information, if PI is not previously registered in PAMS under the submitting small business institution. Please note that a PI can be registered in PAMS under multiple institutions.
- Business Official name and contact information, if not previously registered in PAMS
- Name(s) of any proposed subcontractor(s) or consultant(s), if any
- A Technical Abstract in .PDF format must be uploaded to PAMS, must not exceed 500 words and two pages, and it must provide sufficient technical description of the proposed technology and application to allow DOE to assign technical reviewers to the full grant proposal. The technical abstract may include photos and/or tables, and captions are not included in word count. **However, please note that a technical abstract must not contain any proprietary information.**

Where to Submit: Portfolio Analysis and Management System



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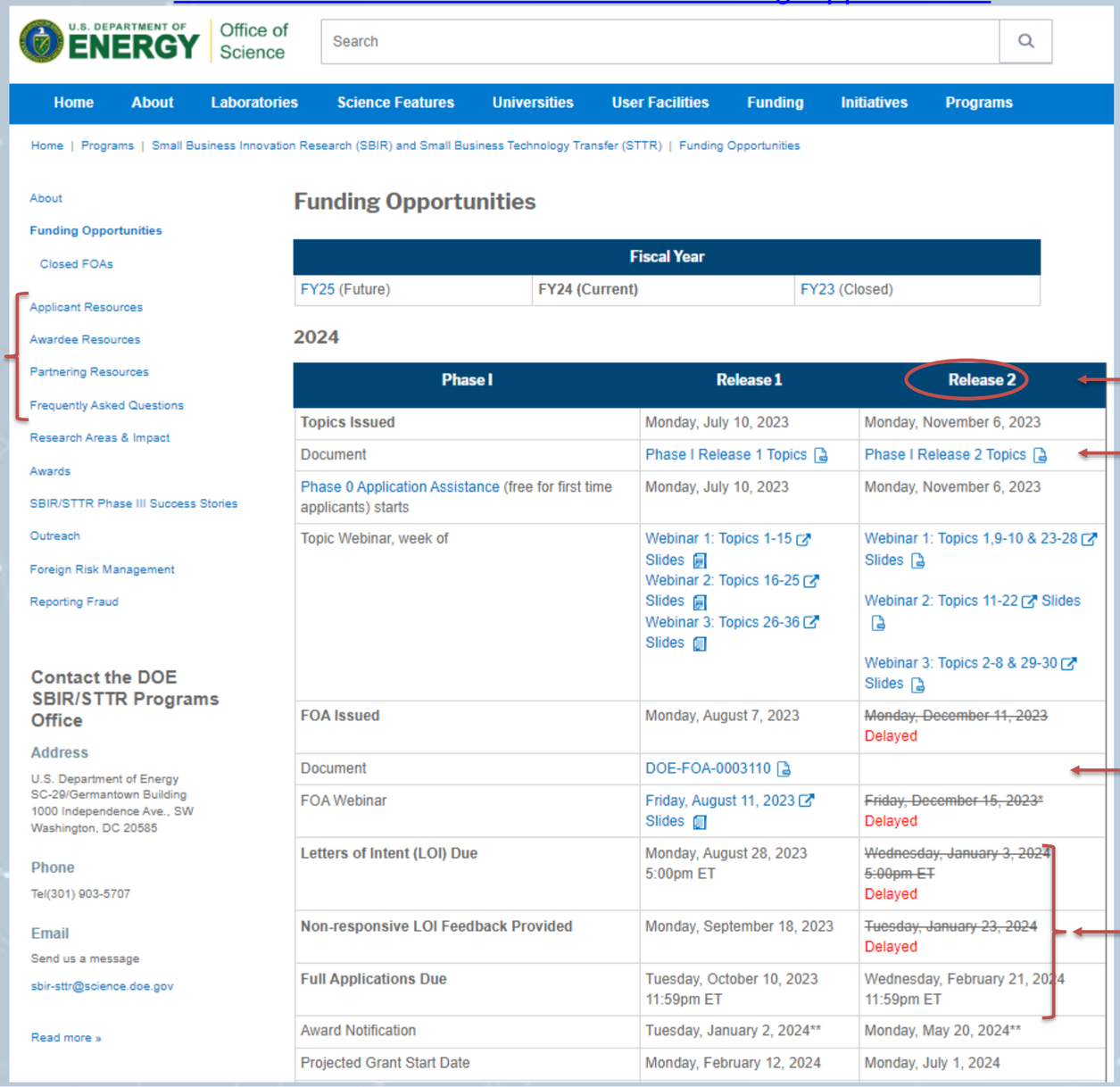
1. Get Familiar with DOE's SBIR/STTR Site

DOE Office of Science SBIR/STTR Funding Opportunities



U.S. DEPARTMENT OF ENERGY | Office of Science

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Home | Programs | Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) | Funding Opportunities

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Closed FOAs
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Awardee Resources
Partnering Resources
Frequently Asked Questions
Research Areas & Impact
Awards
SBIR/STTR Phase III Success Stories
Outreach
Foreign Risk Management
Reporting Fraud

Contact the DOE SBIR/STTR Programs Office

Address

U.S. Department of Energy
SC-29/Germantown Building
1000 Independence Ave., SW
Washington, DC 20585

Phone

Tel(301) 903-5707

Email

Send us a message

sbir-sttr@science.doe.gov

Read more »

Funding Opportunities

Fiscal Year		
FY25 (Future)	FY24 (Current)	FY23 (Closed)

2024

Phase I	Release 1	Release 2
Topics Issued	Monday, July 10, 2023	Monday, November 6, 2023
Document	Phase I Release 1 Topics	Phase I Release 2 Topics
Phase 0 Application Assistance (free for first time applicants) starts	Monday, July 10, 2023	Monday, November 6, 2023
Topic Webinar, week of	Webinar 1: Topics 1-15 Slides Webinar 2: Topics 16-25 Slides Webinar 3: Topics 26-36 Slides	Webinar 1: Topics 1,9-10 & 23-28 Slides Webinar 2: Topics 11-22 Slides Webinar 3: Topics 2-8 & 29-30 Slides
FOA Issued	Monday, August 7, 2023	~~Monday, December 11, 2023~~ Delayed
Document	DOE-FOA-0003110	
FOA Webinar	Friday, August 11, 2023 Slides	~~Friday, December 15, 2023*~~ Delayed
Letters of Intent (LOI) Due	Monday, August 28, 2023 5:00pm ET	~~Wednesday, January 3, 2024 5:00pm ET~~ Delayed
Non-responsive LOI Feedback Provided	Monday, September 18, 2023	~~Tuesday, January 23, 2024~~ Delayed
Full Applications Due	Tuesday, October 10, 2023 11:59pm ET	Wednesday, February 21, 2024 11:59pm ET
Award Notification	Tuesday, January 2, 2024**	Monday, May 20, 2024**
Projected Grant Start Date	Monday, February 12, 2024	Monday, July 1, 2024

View tutorials, detailed instructions, templates, teaming opportunities, and more.

This is the current opportunity (FY24 Release 2).

Read about eligible technologies/projects.

FOA rules will be provided here (later when you enter this number in PAMS, remove the "O" in "DOE").

Updated deadlines for LOI and full application will be provided here.

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2. Choose a Topic

From Table of Contents,
click on a topic of interest.

[FY24 Phase 1 Release 2]

U.S. Department of Energy

Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program

Topics
FY 2024
Phase I
Release 2

Version 6, December 8, 2023

- Office of Cybersecurity, Energy Security, and Emergency Response
- Office of Defense Nuclear Nonproliferation
- Office of Electricity
- Office of Energy Efficiency and Renewable Energy
- Office of Fossil Energy and Carbon Management
- Office of Nuclear Energy

Carefully read about what is eligible…

d. Solar Hardware and Software Technologies: Affordability, Reliability, Performance, and Manufacturing

This subtopic solicits proposals for solutions that can advance solar energy technologies by lowering cost and facilitate the secure integration into the Nation's energy grid. Applications must fall within one of these areas: advanced solar systems integration technologies, concentrating solar thermal power technologies, or photovoltaic technologies.

Specific areas of interest include, but are not limited to:

- Innovative software solutions that will increase the competitiveness of the U.S. solar industry. This may include but is not limited to decreasing solar deployment barriers, expanding to new solar markets, reducing non-hardware costs of installations such as permitting, system design, or interconnection, and/or enabling new business models.
- Technologies that reduce the manufacturing costs of solar energy system components or subcomponents to boost domestic energy manufacturing and increase U.S. manufacturing competitiveness;
- Technologies that can measure, validate, or increase outdoor PV system reliability;
- Technologies which improve operation and maintenance of PV systems. Can include self-contained smart PV systems with sensors which detect actual or imminent power loss, or mobile instrumentation for low-cost field diagnostics.
- Hardware components for photovoltaic-thermal (PVT) technologies, including solar modules, collectors, and control systems;
- Technologies the enable the development and operation of virtual power plants (VPPs), which are a connected aggregation of DER technologies operated in a coordinated way. Such solutions should have a clear focus on solar DERs and VPPs that incorporate solar systems.
- Technologies enhancing the ability of solar energy systems to contribute to grid reliability, resiliency, and security;
- Cyber security technologies improving the ability of solar assets or electronic devices associated with solar energy generation (such as inverters, direct current (DC)-DC optimizers or other converters, and smart meters) and systems to protect themselves from and quickly recover in response to cyber threats;
- Technologies or solutions that reduce the balance-of-system costs of a PV system;
- Technologies that build on other SETO programs and/or leverage results and infrastructure developed through these programs. In the past few years, SETO has funded several programs to support multi-stakeholder teams as they research and develop solutions to reduce significant barriers to solar energy adoption through innovative models, technologies, and real-world data sets. The areas of interest, analysis, taxonomies, and best practices developed from these programs can be leveraged as the impetus for small business innovation;
- Technologies that can improve the overall recyclability and refurbishment of PV modules and/or other hardware or balance-of-system components of a solar system. These could include, but are not limited to, methods for extending the life of existing panels, methods for effectively recycling decommissioned modules, as well as processes for proclamation of key materials (e.g. silver, tellurium, aluminum, etc.), which could ameliorate supply chain issues and further reduce the overall environmental impact of the photovoltaic industry.
- Technologies or solutions for solar for grazing lands (primary interest) and other agricultural PV (APV) uses, where solar systems are collocated with agricultural processes and activities;
- Technology components and systems for application-specific needs such as building-integrated photovoltaics (BIPV), vehicle-integrated photovoltaics (VIPV), floating photovoltaics (FPV), or other infrastructure-integrated photovoltaic systems.

…and what is not.

Applications will be considered nonresponsive and declined without external merit review if they are not based on sound scientific principles, are within the scope of any other of the subtopic listed under the Solar Energy Technologies topic (a-c), or do any of the following:

- Focus exclusively on HVAC or water heating applications;
- Propose products or projects for satellite or other space applications;
- Proposed products or applications of indoor or wearable PV;
- Propose development of concentrated PV or solar spectrum splitting technologies;
- Propose development of technologies with very low possibility of being manufactured domestically at a competitive cost (e.g., PV modules based on copper zinc tin sulfide (CZTS) or amorphous silicon thin films; technologies assuming incorporation of functional materials, such as quantum dots or luminescent solar concentrators);
- Propose technologies to improve the shade tolerance of PV modules;
- Include on business plans or proofs of concept that do not contain documentation supporting their necessity or benefit. Competitive approaches in this application segment should be clearly defined in the application;
- Focus on undifferentiated products, incremental advances, or duplicative products;
- Involve technologies that do not have a clear, direct, and immediate relevance and impact to the solar industry and do not have an immediate solar application or product as their end goal;
- Involve technologies that do not have a clear, direct, and immediate relevance and impact to the solar industry and do not have an immediate solar application or product as their end goal;
- Propose projects lacking substantial impact from federal funds. This subtopic intends to support projects where federal funds will provide a clear and measurable impact (e.g., retiring risk sufficiently for follow-on investment or catalyzing development). Projects that have sufficient monies and resources to be executed regardless of federal funds are not of interest;
- Duplicative software solutions with many existing competitors in the market, including software to facilitate system design or system monitoring and any software solution to improve customer acquisition processes;
- Propose development of ideas or technologies that have already received federal support for the same technology at the same technology readiness level.

Contact the topic manager with any questions (but they cannot provide substantive feedback).

Questions – Contact: solar.sbir@ee.doe.gov

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3. Draft the Letter of Intent

Download this worksheet and follow along!
(Note: This is a resource CEBN has prepared to assist you, and is not official DOE guidance)

REQUIRED ELEMENTS	RESPONSE
Solicitation Number	DE-FOA-(number TBD on this website)
Institution	Incredible Innovators, Inc.
Principal Investigator	Jane Doe
Email Address	jdoe@iii.com
Phone Number	(102) 345-6789
Address	123 Imagination Way, City, ST 10234
Project Title (same for LOI & full application)	Strengthening Grid Reliability through X Solar Innovation
Topic & Subtopic (from topics document)	17d

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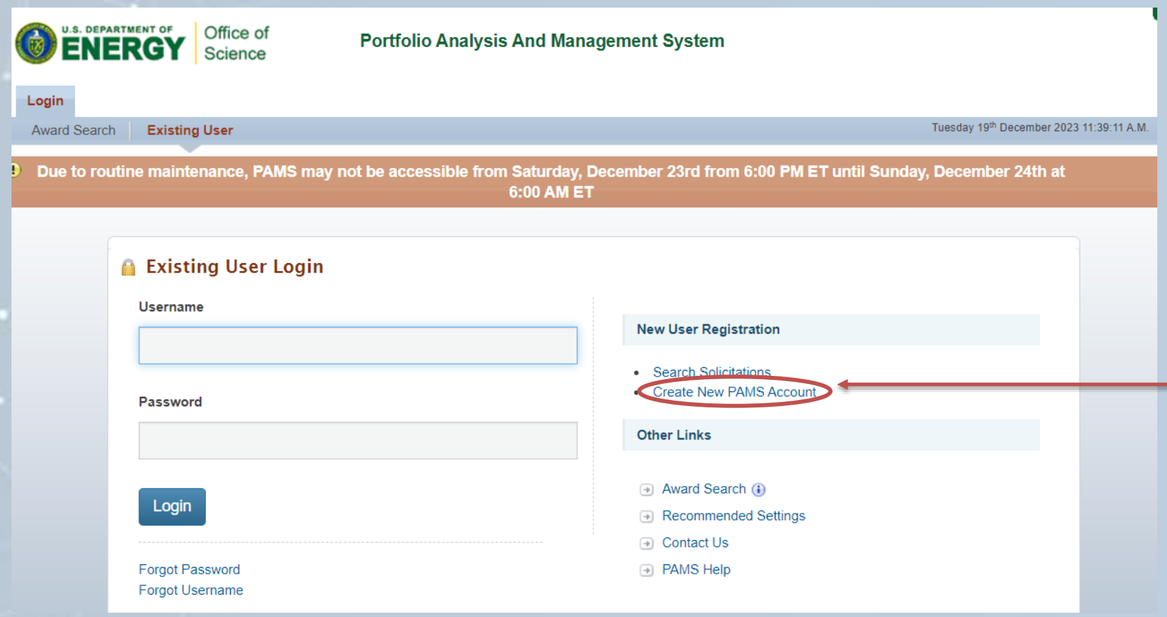
ITEMS TO INCLUDE IN LOI	NOTES	REWORKED IN NARRATIVE FORM
Relevant Areas of Interest in this Subtopic	We should focus on the following concepts in Subtopic 17d: • "Technologies enhancing the ability of solar energy systems to contribute to grid reliability, resiliency, and security." • "Technologies that can measure, validate, or increase outdoor PV system reliability."	Incredible Innovators' novel software and hardware package will strengthen grid reliability by addressing X,Y, and Z challenges with currently available technologies. Furthermore, X aspect will help grid-scale PV operators and utilities improve measurement and validate reliability under a variety of weather conditions.
Novelty and Other Benefits of Our Technology	Our proposed technology is novel because____. Examples of benefits include: • Cost: • Reliability: • Performance: • Materials: • Manufacturing process: • Unique value to target markets/end uses: • Other:	It is anticipated that this solution will result in X% increased efficiency of solar energy systems and Y% reduction in grid disruptions, particularly reducing blackouts and brownouts in urban areas subject to frequent extreme heat episodes.
Our Objectives for Phase I	With about $200-250k in funding and 9 months of work we can achieve the following SMART goals (Specific, Measurable, Achievable, Relevant, and Time-Bound): • Develop X prototype • Y% improvement in efficiency • Validation plan • Grid integration plan • Other	A Phase I award will enable the development of X prototype, achieving Y% improvement in efficiency compared to currently-available solutions. This will be validated in partnership with ___ as follows____. Initial progress to integrate with grid systems will be demonstrated by ___.
Areas to Avoid	Make sure we avoid these concepts described as "nonresponsive" in Subtopic 17d: "Duplicative software solutions with many existing competitors in the market, including software to facilitate system design or system monitoring and any software solution to improve customer acquisition processes"	Seems we can't discuss that software we are developing to strengthen customer adoption – it would be considered "customer acquisition" and is also not that novel compared to other things on the market. We'll need to fund that elsewhere.

4. Register in SAM

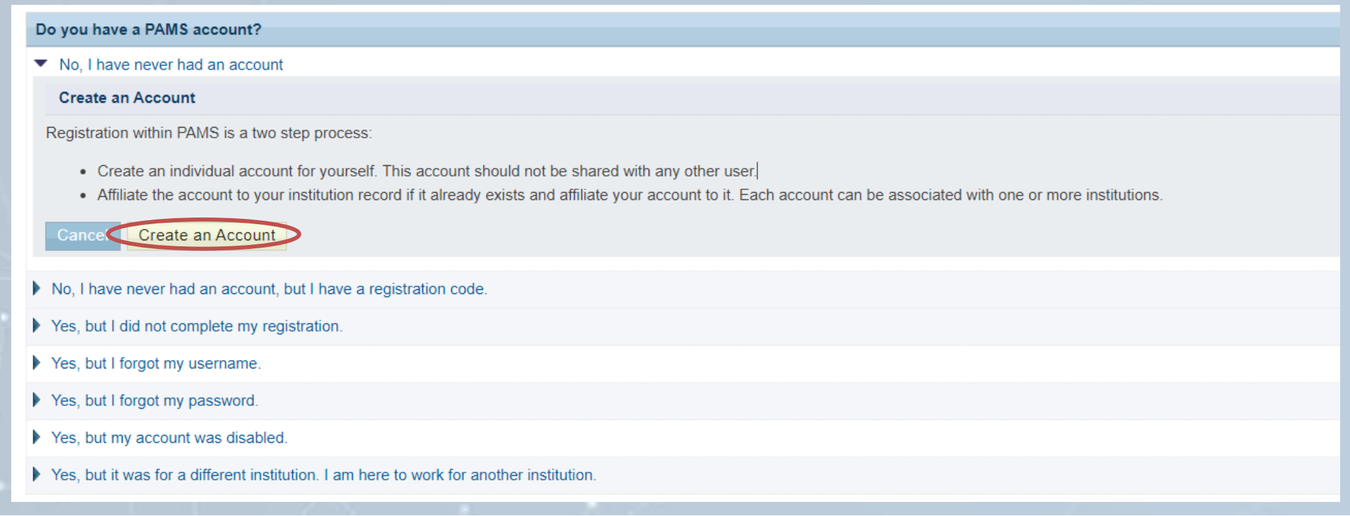
Obtain a “Unique Entity Identifier (UEI)”: System of Award Management
Checklist: Confirm Documents Needed
Instructions: Federal Service Desk
Reminders: Register ASAP – and beware of private sites claiming to do this for a fee!

5. Register in PAMS

Where to Submit LOI: Portfolio Analysis and Management System
Instructions: PAMS External Help



If you are new to PAMs, first register yourself as an individual user. Then, in the following steps you will register or find your company/organization.



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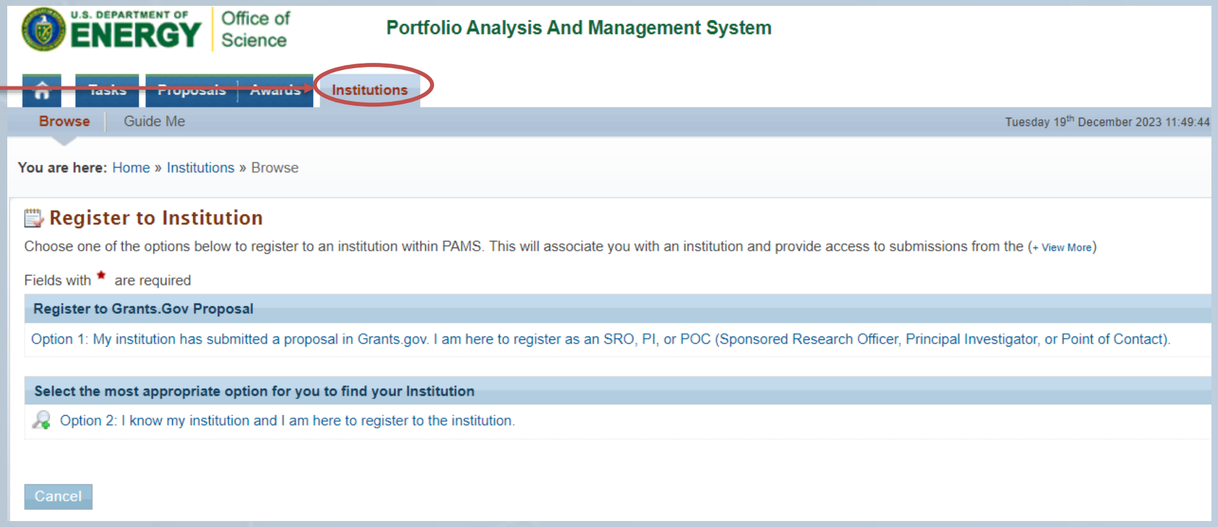
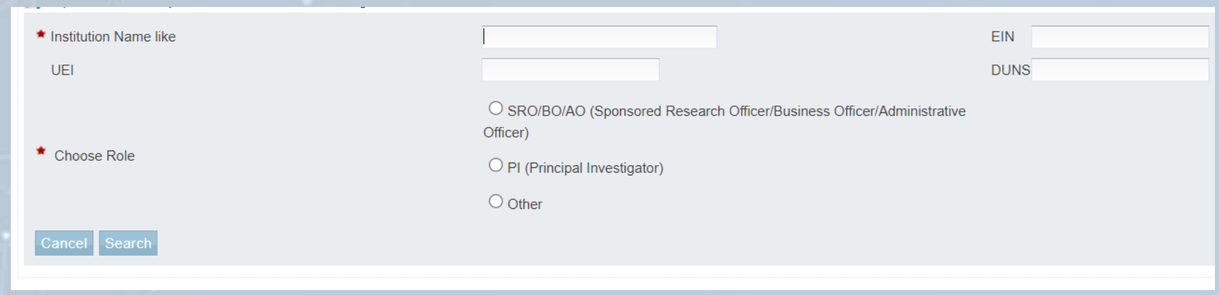
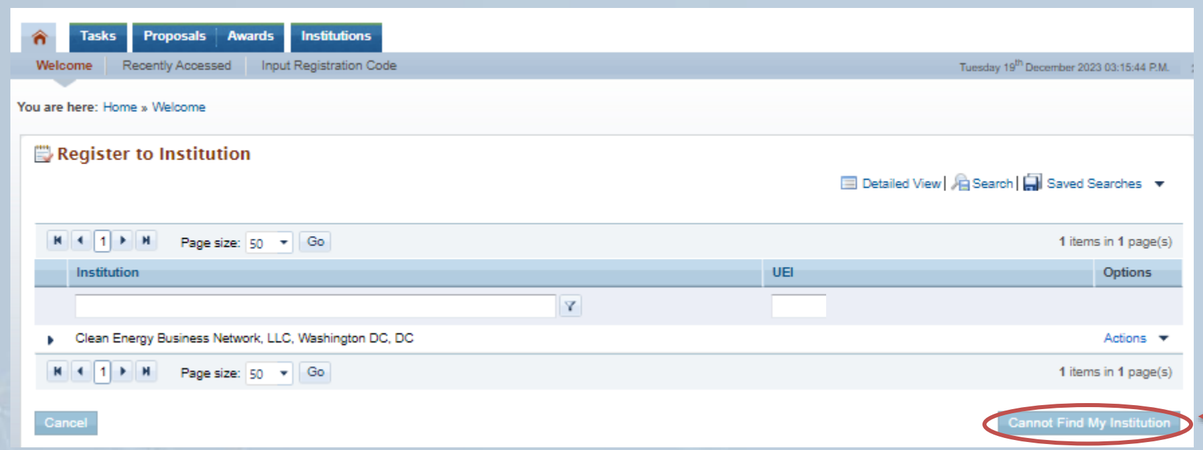
After registering yourself, click on “Institutions.”



To start a new proposal, click here.

Enter at least part of your organization name (even if it’s not registered yet in PAMS) and your role within it.





If your company doesn’t show up in search results (or you know it’s not registered), click here.

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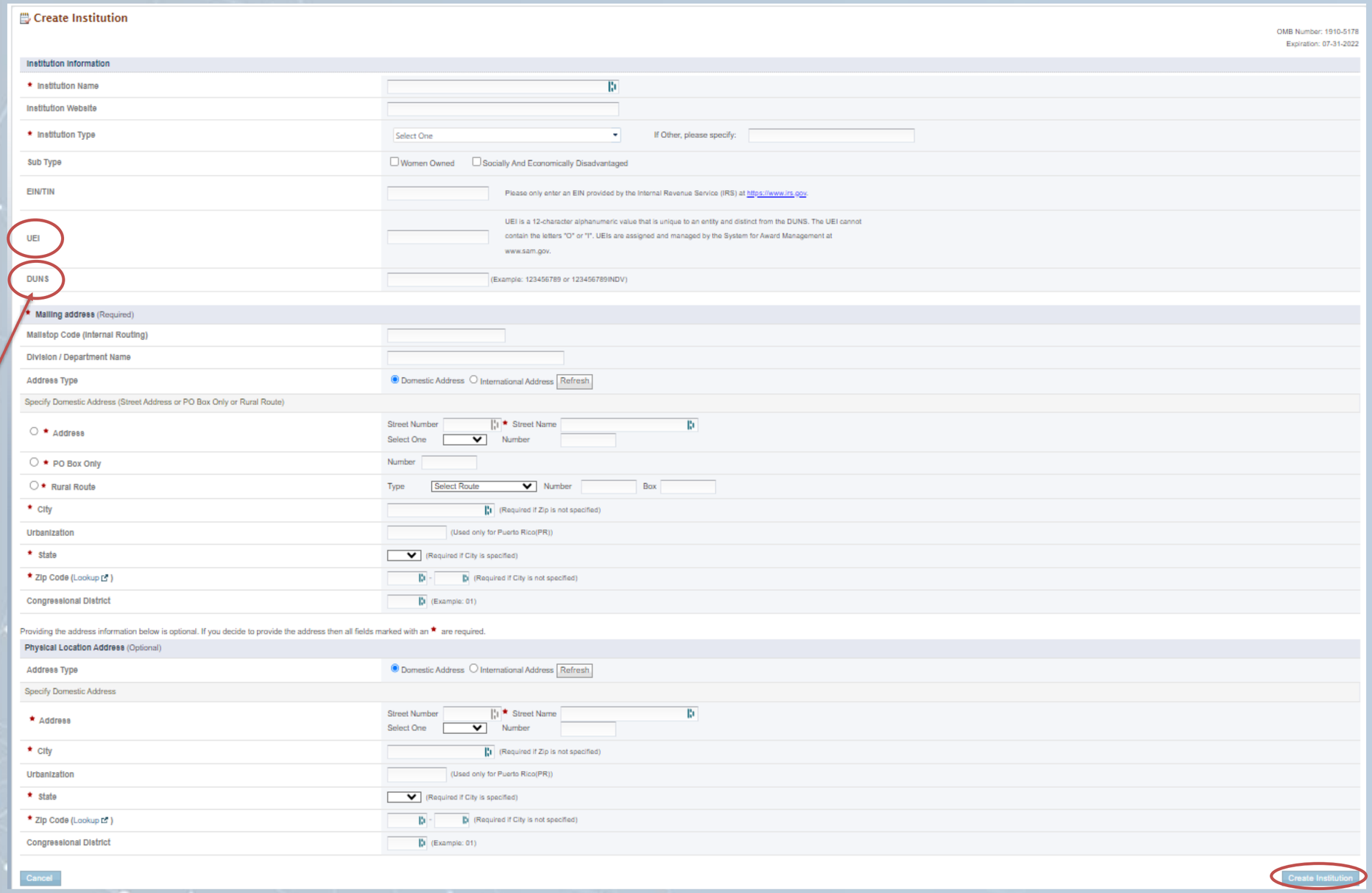
Create a new institution if yours is not yet registered.

Obtain UEI by registering in SAM. (you MAY be able to register in PAMS without it, but could encounter an error).

Ignore DUNS – no longer needed



Create Institution

OMB Number: 1910-5178
Expiration: 07-31-2022

Institution Information

* Institution Name
Institution Website
* Institution Type — Select One — If Other, please specify:
Sub Type — Women Owned — Socially And Economically Disadvantaged
EIN/TIN — Please only enter an EIN provided by the Internal Revenue Service (IRS) at https://www.irs.gov
UEI — UEI is a 12-character alphanumeric value that is unique to an entity and distinct from the DUNS. The UEI cannot contain the letters "O" or "I". UEIs are assigned and managed by the System for Award Management at www.sam.gov.
DUNS — (Example: 123456789 or 123456789INDV)

Mailing address (Required)

Mailstop Code (Internal Routing)
Division / Department Name
Address Type — Domestic Address — International Address — Refresh
Specify Domestic Address (Street Address or PO Box Only or Rural Route)
* Address — Street Number — Select One — * Street Name — Number
* PO Box Only — Number
* Rural Route — Type — Select Route — Number — Box
* City — (Required if Zip is not specified)
Urbanization — (Used only for Puerto Rico(PR))
* State — (Required if City is specified)
* Zip Code (Lookup) — (Required if City is not specified)
Congressional District — (Example: 01)

Providing the address information below is optional. If you decide to provide the address then all fields marked with an * are required.

Physical Location Address (Optional)

Address Type — Domestic Address — International Address — Refresh
Specify Domestic Address
* Address — Street Number — Select One — * Street Name — Number
* City — (Required if Zip is not specified)
Urbanization — (Used only for Puerto Rico(PR))
* State — (Required if City is specified)
* Zip Code (Lookup) — (Required if City is not specified)
Congressional District — (Example: 01)

Cancel — Create Institution

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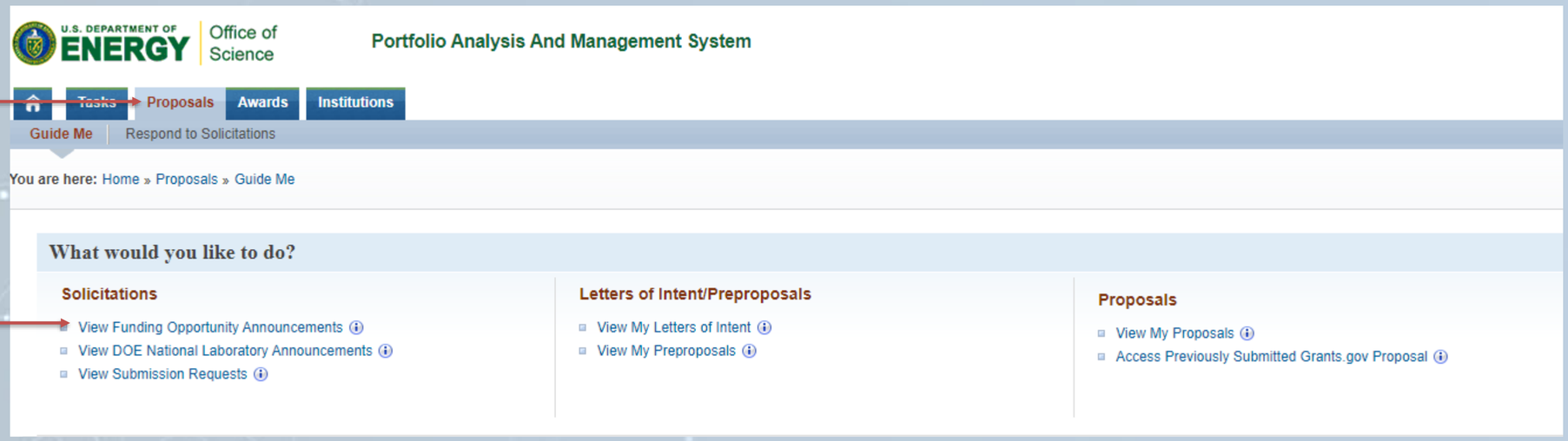
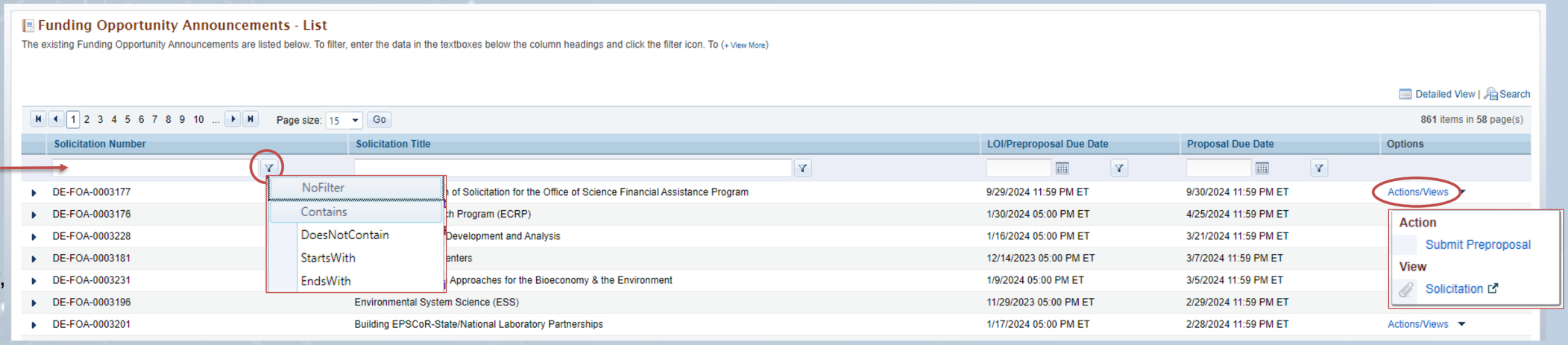
6. Submit the Letter of Intent in PAMS

Click on “Proposals” and then “View Funding Opportunity Announcements”



Type in the relevant [SBIR/STTR FOA number] (e.g., DE-FOA-XXXXXXX)

Click on funnel icon to filter, and then “Contains”



After finding the appropriate FOA, click on “Actions/Views” and “Submit LOI” (or “Submit Preproposal”)

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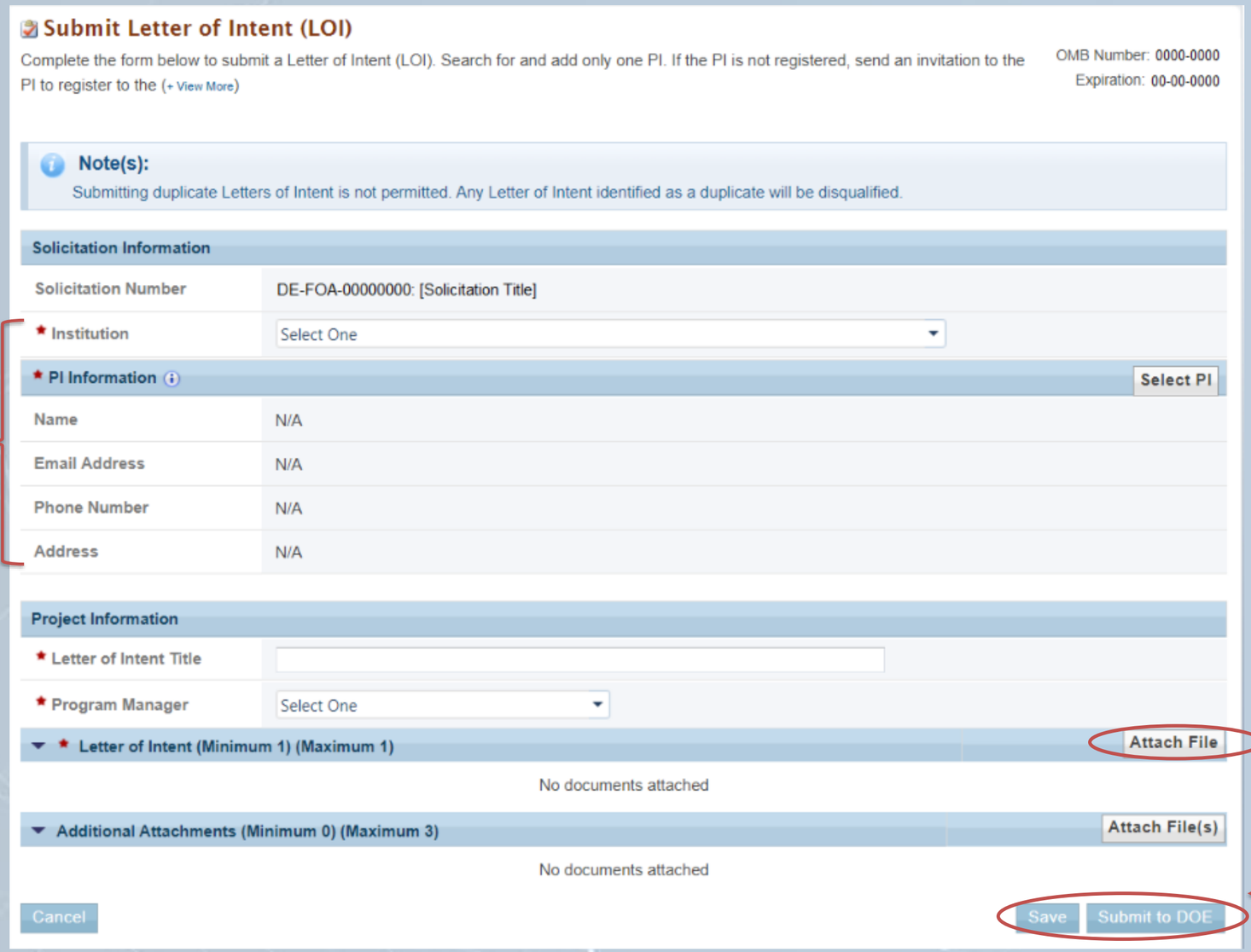

Complete the required contact fields

LOI Title must be the same as your

Upload the LOI (500 words) as a pdf here.

Save for later and submit when ready.

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Technical Support

PAMS Help Desk
Mon.-Fri. 9:00 am – 5:30 pm ET
855-818-1846 or 301-903-9610
sc.pams-helpdesk@science.doe.gov

SAM Help (Federal Service Desk)
Mon.-Fri. 8:00 am – 8:00 pm ET
866-606-8220
Live Chat (bottom of this page)

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General Support

Power Connectors:

Not official guidance but can help! Stay tuned for upcoming events.

ADL Ventures: frank@adlventures.com; athanasios.tsouknidas@adlventures.com; nigara.nizamidin@adlventures.com
Clean Energy Business Network: cebn@cebn.org
Entrepreneur Futures Network: tjensen@entrepreneurfutures.org; ccoravos@entrepreneurfutures.org
OpenSeas: jcronin@odu.edu
University of Arizona Center for Innovation: amanda.buchanan635@gmail.com; office hours 12/22 and 1/2

Application Assistance:

Free service, limited to first-time DOE SBIR/STTR applicants.

Dawnbreaker/Phase0: Apply here

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SBIR/STTR Teaming Opportunities

- SBIR/STTR Partnering Resources (including commercialization, testing facilities, etc.)
- SBIR/STTR Partner/Innovator Matching Platform
- Lab Partnership Service (experts at National Laboratories)
- American-Made Network