

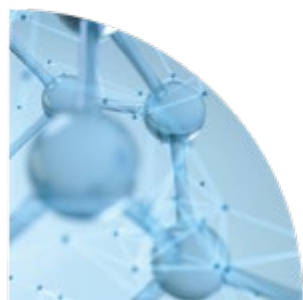


# Overview of the DOE SBIR/STTR Proposal Preparation Process

Jenny C. Servo, Ph.D.  
Dawnbreaker

January 10, 2025

© DAWNBREAKER, 2025



# AGENDA

- Schedule
- Key documents
  - Please
- Letter of Intent (LOI)
  - Purpose
  - PAMS
- Overview of the DOE SBIR/STTR application package



A futuristic server room with glowing blue lights and data patterns. The room is filled with server racks and a complex network of light trails and data points, creating a sense of depth and technological sophistication. The lighting is predominantly blue, with a bright light source at the end of the aisle. The server racks are lined up on both sides, and the ceiling features a grid of lights.

# Locating Needed Resources



Primary Resource

<https://science.osti.gov/sbir/Funding-Opportunities>

2025

Phase I	Release 1	Release 2
<b>Topics Issued</b>	Monday, July 8, 2024	Tuesday, November 12, 2024
Document	<a href="#">Phase I Release 1 Topics</a>	<a href="#">Phase I Release 2 Topics</a>
<b>Phase 0 Application Assistance</b> (free for first time applicants) starts	Monday, July 8, 2024	Tuesday, November 12, 2024
Topic Webinar, week of	<a href="#">Webinar 1: Topics 1-11</a> <a href="#">Slides</a> <a href="#">Webinar 2: Topics 12-22</a> <a href="#">Slides</a> <a href="#">Webinar 3: Topics 23-33</a> <a href="#">Slides</a>	<a href="#">Webinar 1: Topics 1, 20-21, 32-33</a> <a href="#">Slides</a> <a href="#">Webinar 2: Topics 2-10</a> <a href="#">Slides</a> <a href="#">Webinar 3: Topics 11-16</a> <a href="#">Slides</a> <a href="#">Webinar 4: Topics 17-19 &amp; 22-31</a> <a href="#">Slides</a>
<b>NOFO Issued</b>	Monday, August 5, 2024	Friday, December 27, 2024
Document	<a href="#">DE-FOA-0003417</a>	<a href="#">DE-FOA-0003504</a>
NOFO Webinar	<a href="#">Thursday, August 8, 2024 (Webinar)</a> <a href="#">Slides</a> <a href="#">Friday, August 9, 2024 (Q&amp;A)</a>	<a href="#">Thursday, January 2, 2025 (Webinar)</a> <a href="#">Slides</a> <a href="#">Friday January 3, 2025 (Q&amp;A)</a>
<b>Letters of Intent (LOI) Due</b>	Tuesday, August 27, 2024 5:00pm ET	Tuesday, January 14, 2025 5:00pm ET
<b>Non-responsive LOI Feedback Provided</b>	Monday, September 16, 2024	Monday, February 3, 2025
<b>Full Applications Due</b>	Tuesday, October 8, 2024 11:59pm ET	Wednesday, February 26, 2025 11:59pm ET





# KEY DOCUMENTS

\*Check periodically for amendments

- Topics Document\*
- Notice of Funding Opportunities (NOFO)\* (was amended today)
- DOE SBIR/STTR Phase I Grant Application Guide
- DOE Phase 0 Tutorials

If you find inconsistencies, always follow the information in the NOFO



# DOE SBIR/STTR Topics Document

- The topics document states IF, you can submit an SBIR or STTR proposal in response to a topic.
- The topics document indicates the award ceiling on each topic
- A contact's name is provided for many subtopics
- The topics document may be updated from time to time
- You must respond to a Topic and a Subtopic





**Department of Energy (DOE)  
Office of Science (SC)  
Small Business Innovation Research (SBIR) / Small Business  
Technology Transfer (STTR)**



**FY25 Phase I Release 2**

**Notice of Funding Opportunity (NOFO) Number:  
DE-FOA-0003504**

**NOFO Type: **Amendment 000001**  
CFDA Number: 81.049**

**Amendment 000001: This amendment updates the Letter of Intent Response Date to February 3, 2025.**

NOFO Issue Date:	December 27, 2024
Submission Deadline for Letters of Intent:	January 14, 2025 at 5:00PM Eastern Time A Letter of Intent is required.
Letter of Intent Response Date	February 3, 2025
Submission Deadline for Applications:	February 26, 2025 at 11:59PM Eastern Time



# Letter of Intent (LOI) Instructions

An essential gate!





# Why does DOE have a Letter of Intent (LOI)

- Congress has asked agencies participating in the SBIR/STTR programs to announce their awards within 90 days of application submission deadlines
- To do this, DOE selects reviewers early.
- The LOI enables them to do this



# Lets' talk about LOIs

- Submitted through the Portfolio Analysis and Management System (PAMS)

<https://pamspublic.science.energy.gov/webpamsepsexternal/login.aspx>

<b>Grants.gov Customer Support</b>	800-518-4726 (toll-free) <a href="mailto:support@Grants.gov">support@Grants.gov</a>
<b>PAMS Customer Support</b>	855-818-1846 (toll-free) 301-903-9610 <a href="mailto:sc.pams-helpdesk@science.doe.gov">sc.pams-helpdesk@science.doe.gov</a>
<b>Technical/Scientific Program Contact</b>	Please refer to the appropriate DOE Program Manager listed after each subtopic in the accompanying DOE SBIR/STTR Topics document located on the DOE SBIR/STTR Programs website at <a href="https://science.osti.gov/sbir/Funding-Opportunities">https://science.osti.gov/sbir/Funding-Opportunities</a> .
<b>Administrative Contact (questions about budgets and eligibility)</b>	Carl Hebron, (301) 903-5707, <a href="mailto:SBIR-STTR@science.doe.gov">SBIR-STTR@science.doe.gov</a>

Contacts from  
Page 2 NOFO

# Letter of Intent (LOI) guidelines , Pg 26

- Title of LOI
- PI Name, Job Title
- Institution
- PI Phone Number, PI Email Address
- NOFO Number (on cover)
- Topic number/Subtopic letter, e.g. C60-01a
- The Title is important
- It will be used on all key docs
- It should signal what your project is about



# Letter of Intent (LOI) guidelines , Pg 26

- Include a list of all senior/key personnel at the applicant and team member institutions
- This information must be followed by a clear and concise description of the objectives and technical approach of the proposed research. Your technical abstract should sufficiently describe your technology and application. It must provide sufficient technical depth to allow DOE to assign technical reviewers for your application. Please note that your abstract should not contain any proprietary information.
- 2 pages 11 point, 1 inch margins all sides



# Remember

- The LOI is NOT a letter
- It needs to clearly relate to the topic/subtopic pair
- It IS a technical abstract
  - Objectives
  - Technical approach
- Write in paragraph form, not outline form
- Do not include proprietary information



# Anatomy of Topics document

**PROGRAM AREA OVERVIEW: OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE..... 10**

**C60-01. MALICIOUS EVENT DETECTION, DIAGNOSIS, AND RISK MITIGATION..... 10**

- a. AI for Malicious Event Detection & Diagnosis in the Energy Sector (IIJA) ..... 11
- b. Distribution Substation Ballistic Risk Mitigation (IIJA) ..... 12

**PROGRAM AREA OVERVIEW: OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY ..... 15**

**C60-02. ADVANCED MATERIALS AND MANUFACTURING TECHNOLOGIES ..... 16**

- a. Digital Twin Technology for Quality Assurance of Clean Energy Products..... 17
- b. Compiler-Based Approaches for Secure by Design for Industrial Control Systems..... 19
- c. Acoustic and Electric Field-Assisted Manufacturing for Better Batteries, Power Electronics, and Microelectronics..... 20
- d. Efficient & Responsible Critical Material Refining ..... 22
- e. Mechanical Recycling of Textiles ..... 23

**C60-03. JOINT ADVANCED MATERIALS AND MANUFACTURING TECHNOLOGIES / BIOENERGY TECHNOLOGIES OFFICES TOPIC: PLASTIC CIRCULARITY ..... 28**

- a. Plastic Circularity ..... 29

**C60-04. BIOENERGY TECHNOLOGIES ..... 33**

- a. Bioenergy Feedstock Logistics Improvements (EES) ..... 33

**C60-05. BUILDING TECHNOLOGIES OFFICE ..... 35**

- a. Windows ..... 36
- b. Affordable TES Systems..... 37
- c. Advanced Air Leakage Detection and Air Sealing Technologies..... 38
- d. High Performance Insulated Cladding for Residential Field Applied Applications ..... 39
- e. ResStock Data Analysis Tool for States and Local Governments ..... 40
- f. Multifamily Energy Use Data Research..... 41
- g. NO2 monitors ..... 41
- h. Heat pumps for manufactured houses..... 42
- i. Easier & More Accurate Manual J Technology ..... 43
- j. Serviceable Mini-Split/PTHP/PTAC..... 43
- k. Highly Efficient Dehumidification ..... 44
- l. Heat Pump Water Heater (HPWH) Installation Cost Reduction ..... 44

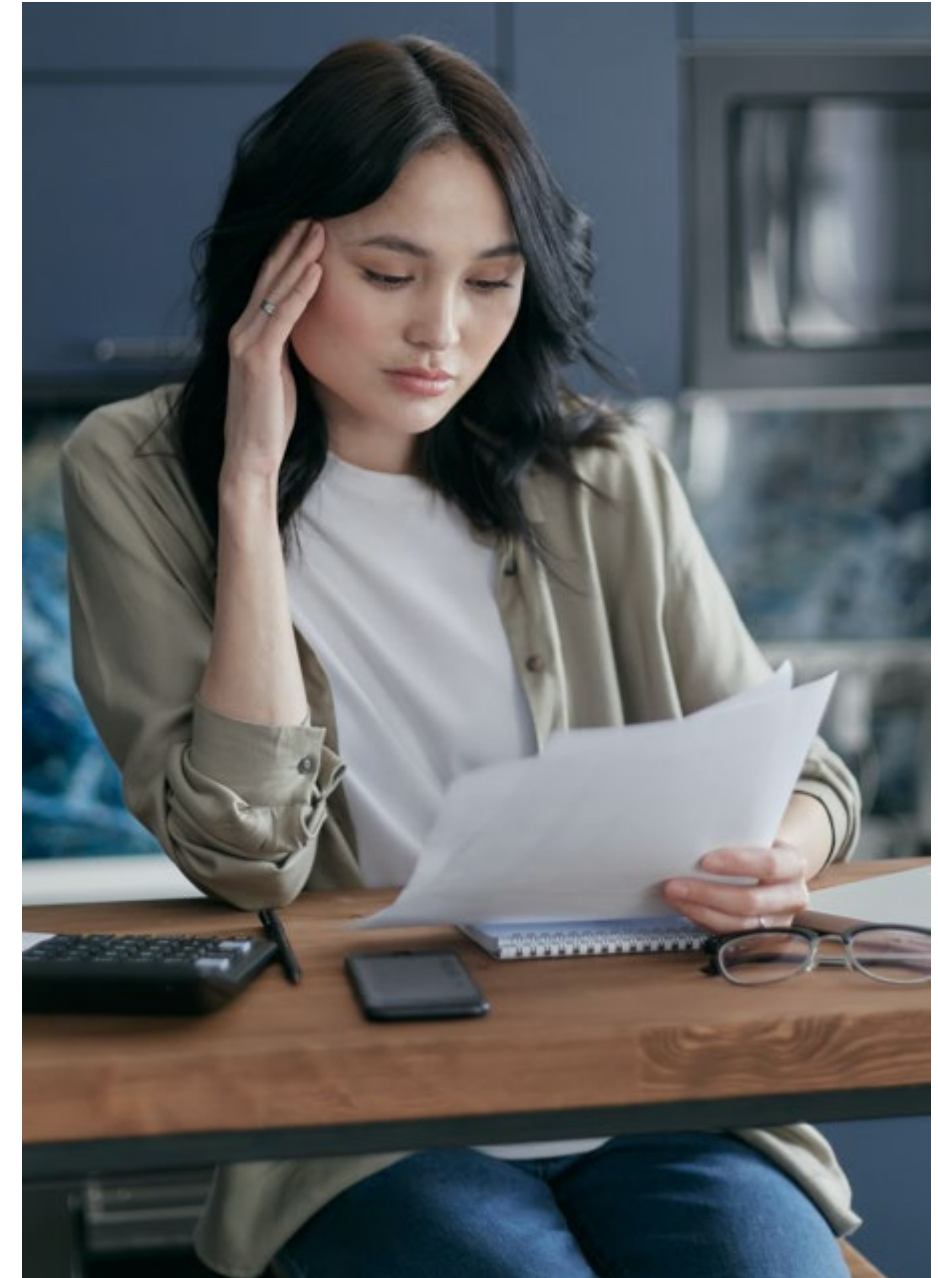
**C60-06. GEOTHERMAL HEATING AND COOLING ..... 45**

- a. Low-impact drilling systems for GHPs ..... 46
- b. Rapid Site Assessments for Geothermal Heat Pumps ..... 47

Office →

Topic # →

Subtopic letters →



# What happens if I get a non-responsive notice from DOE?



- **You can still submit an application if you receive a non-responsive letter from DOE**
  - DOE only sends an email to those whose LOIs are non-responsive
  - You can only submit an application based on the LOIs that you submit.
  - You cannot just change topics/subtopics
  - You can submit multiple LOIs
- **New addition**
  - Feedback to responsive applicants will be provided to the following topics: C59-01, 03, 04, 09, 10, 11, 12. Responsive feedback may include encouragement or discouragement to submit a full application



# Registrations

- PAMS
- SAM
- SBA Company Registration





# System for Awards Management (SAM)

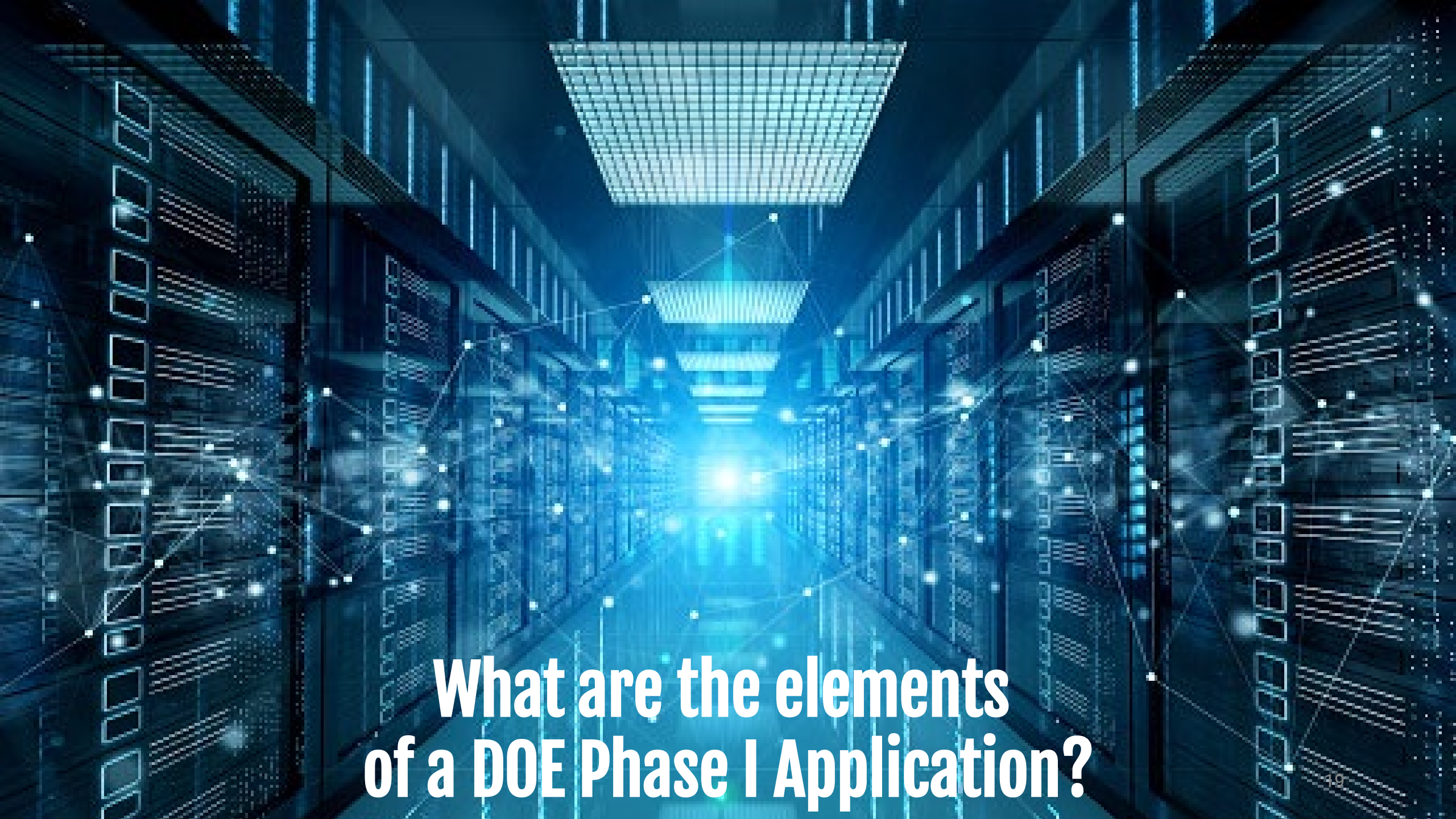
- If you are planning to apply for a federal grant or contract, complete this at any time
- This process is currently taking two-to- three months to clear
- **To minimize delays in the registration process:**
  - Always use the same company name and address (no variations)
  - Make sure that this is the same information that you use with IRS
  - Keep copies of your SAM password and UEI handy
  - Check trash for CAGE code – still currently coming from DLA (Defense Logistics Agency)
  - Work with a local Procurement Technical Assistance Center (PTAC)
    - <https://www.aptac-us.org/find-a-ptac/?state=PR>



# Implications

- Some companies that start their SAM registration as soon as they start working on their proposal, have not received information in time to submit their proposal

**You can't submit a responsive proposal, if you are not registered with SAM**

A futuristic server room with glowing blue lights and data patterns. The room is filled with server racks on both sides, and the floor is covered in a grid of glowing blue lines. The ceiling is a complex, grid-like structure with glowing blue lights. The overall atmosphere is high-tech and digital.

**What are the elements  
of a DOE Phase I Application?**

# What is the structure of DOE Phase I application package?



- In order to apply for a DOE SBIR/STTR award you need to :
  - First submit a **Letter of Intent** (LOI) through the system called Portfolio Analysis and Management System (**PAMS**)
  - Prepare a research proposal (called a “**Project Narrative**”)
  - and a **Commercialization Plan**
  - with an accompanying **budget** and
  - **Resumes** (biographical sketches) of those who will do the work
  - A **PIER plan**
  - A **public abstract**
  - A variety of forms and attachments
  - Register with the **System for Awards Management (SAM)**
  - Submit the application through a system called **Grants.gov**



# The Project narrative is the heart of the proposal

Cover Page

Proprietary Data Legend

1.0 Identification and Significance of the Problem or Opportunity, and Technical Approach

2.0 Anticipated Public Benefits

3.0 Technical Objectives

4.0 Work Plan

5.0 Performance Schedule

6.0 Facilities/Equipment

7.0 Research Institution

8.0 Other Consultants and Subcontractors

9.0 Bibliography and References Cited





# Start the Projective Narrative next



# First two sections of Project Narrative

Pgs 33–35 of NOFO

- **Identification and Significance of the Problem or Opportunity, and Technical Approach** – Define the specific technical problem or opportunity addressed by your application. Provide enough background information so that the importance of the problem/opportunity is clear. Indicate the overall technical approach to the problem/opportunity and the part that the proposed research plays in providing needed results.
- **Anticipated Public Benefits** – Discuss the technical, economic, social, and other benefits to the public as a whole anticipated if the project is successful and is carried over into Phases II and III. Identify specific groups in the commercial sector as well as the Federal Government that would benefit from the projected results. Describe the resultant product or process, the likelihood that it could lead to a marketable product, and the significance of the market.





# How big is the proposal / application?



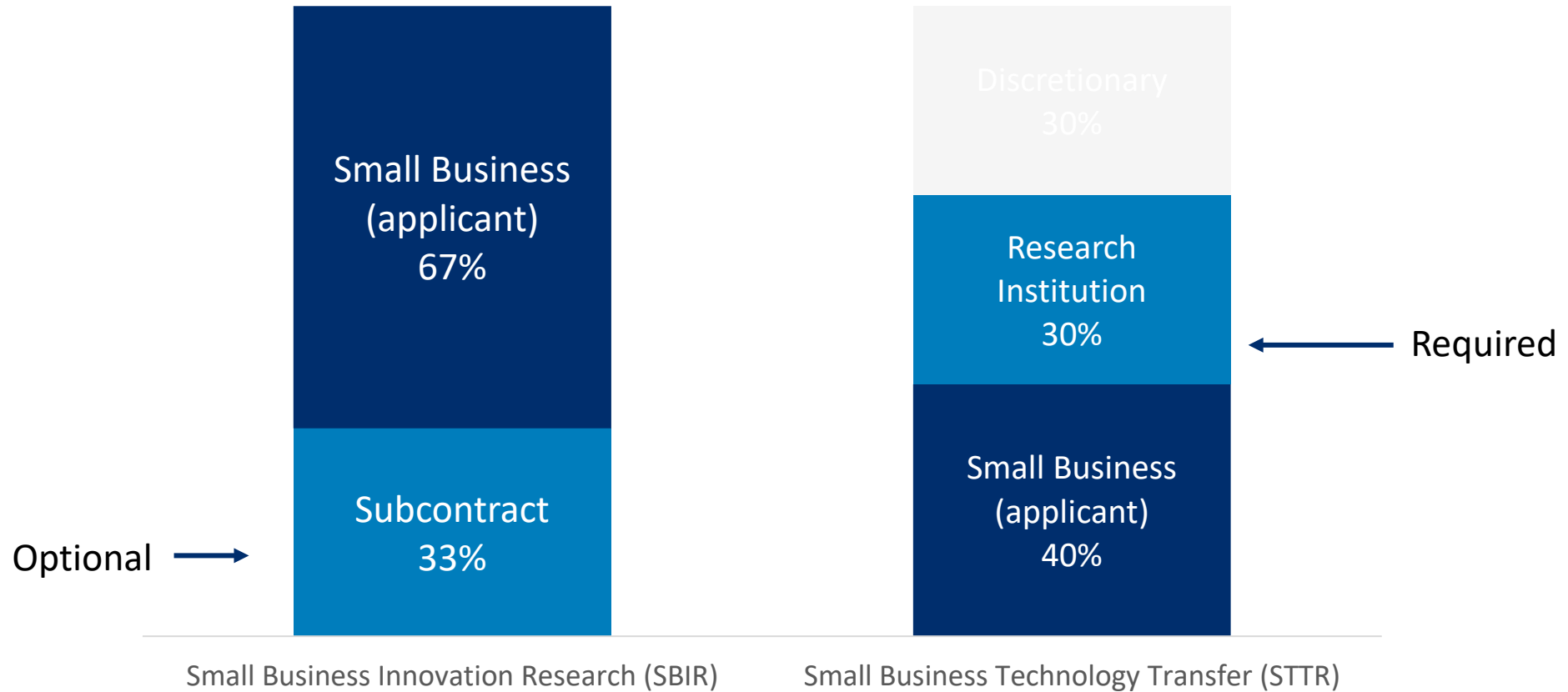
Item	Project Narrative	Commercialization Plan	Budget justification	Biographical sketches	Project Abstract	PIER Plan
Page numbers	15 pages, cover doesn't count	4 pages	Not specified	Use form	1 page	No more than 3 pgs
Other	Follow guidelines in DOE Funding Opportunity Announcement (FOA)	Follow Guidelines Under Applicant Resources	Stay within budget. Use Budget Justification form	Follow guidelines in <i>Instructions for Completing a DOE SBIR/STTR Phase I Grant Application</i>	PDF format	Appendix to Project Narrative

1/10/20  
25

DAWNBREAKER

24

# What's the difference between SBIR and STTR?



**The small business is ALWAYS the applicant and awardee!**





# Administrative Review Process





# Administrative Review Process

- Every agency conducts an Administrative review first
- If the proposal does not pass the Administrative review step, it will not go through Scientific/Technical review and will be declined
- Common reasons for NOT passing the administrative review include:
  - The proposed budget is higher than what the agency allows in Phase I
  - Some of the required forms were NOT included
  - The company did not adhere to the page count, margins, etc.
  - The proposal was not for research and development
  - The proposal was submitted after the deadline



# How to pass Administrative Review?

When you review an agency solicitation,

- Read the **application guidelines** very carefully
- Prepare a PPT to share with others who are assisting you and include
  - The due date a time
  - Any guidelines regarding page limits, font type and size, margins, markings
  - Budget for Phase I awards
  - Evaluation criteria
  - See if a checklist is included in the solicitation
  - Determine through which system the SBIR/STTR application must be delivered
  - Generate a list of all forms that must be completed
  - Note any additional registrations, besides the three mentioned earlier
  - Note any initial steps that affect your ability to submit an application, later



# Agency Evaluation Criteria

Write **to** the evaluation criteria!



# Technical Plan – the Heart of the Proposal

- Every solicitation requires that you draft a technical plan, which may be called different things depending on the agency. For example
  - Project Narrative (DOE, USDA)
  - Technical Volume (DoD, NASA)
  - Project Description (NSF)
  - Research Plan (NIH)
- This section is the heart of the proposal and the key part that reviewers will evaluate. Be sure that you review the evaluation criteria, presented in the solicitation, before you start drafting this section.





# Follow the Outline Precisely

- The sections that an agency wants to see in the technical plan, are unique to that agency
- The agency provides an outline in the Phase I solicitation
- Follow the outline precisely
- This makes it easy for reviewers to find information they need to evaluate
- Build this document in stages and secure feedback as you develop
- Gradually winnow down to the page length to that specified



# All solicitations include evaluation criteria



# DOE Evaluation Criteria (pg 75)



## 2. Merit Review Criteria

DOE plans to make selections for Phase I awards from those applications judged to have the highest overall merit within their technical program area, with equal consideration given to each of the following criteria:

**Strength of the Scientific/Technical Approach** as evidenced by

- (1) the innovativeness of the idea and the approach,
- (2) the significance of the scientific or technical challenge, and
- (3) the thoroughness of the presentation.

**Ability to competently carry out the project** as evidenced by

- (1) the qualifications of the PI, other key staff, subcontractors and consultants, if any, and the level of adequacy of equipment and facilities;
- (2) the soundness and level of adequacy of the work plan to show progress toward proving the feasibility of the concept; and
- (3) the degree to which the DOE investment in the project would be justified by the level of proposed research effort.

**Impact** as evidenced by

- (1) the significance of the technical and/or economic benefits of the proposed work, if successful,
- (2) the likelihood that the proposed work could lead to a marketable product or process,
- (3) the likelihood that the project could attract further development funding after the SBIR or STTR project ends, and
- (4) the appropriateness of the data management plan for the proposed work.

**Quality and Efficacy of Promoting Inclusive and Equitable Research (PIER) Plan**, as evidenced by:

# How do I keep this simple!?

- **Understand what is the most important**
  - The Project Narrative
  - Evaluation criteria: Innovation, Team, Facilities
- **Know where and when to get help!**
  - For those in the Phase 0 program – we will help you
  - For others – reach out to your local Small Business Development Center and/or Procurement Technical Assistance Center
  - Listen to the Tutorials on [DOE Phase 0 website](#)
    - Podcasts and PDFs



Thank you for joining me today!

Jenny C. Servo, Ph.D.  
jcservo@dawnbreaker.com

