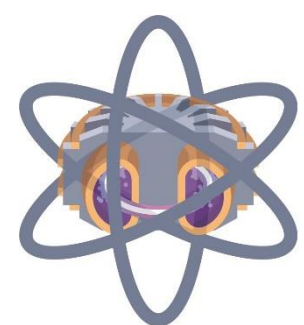


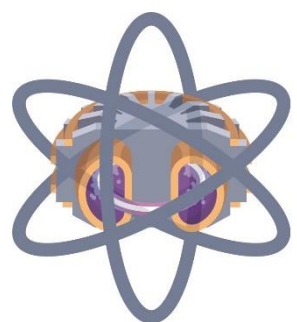
INFUSE Update – December 2021

Dennis Youchison & Ahmed Diallo



What's changing?

- Expansion of INFUSE – All 17 DOE national laboratories and accredited universities
 - “Laboratory” now replaced by “institute” = DOE national lab or U.S. accredited university
- Cycle Schedule now includes university pilot program (see Daniel Clark on FOA process)
- New RFA Call Document
- Changes in Sharepoint submission form
- Intellectual Property Management Plan (universities only)
- Next RFA Submission Period – Jan. 3 – Feb. 11, 2022



Opportunity Announcement now in one document

<https://infuse.ornl.gov/wp-content/uploads/2021/12/FY2022-INFUSE-RFA-final.pdf>

- **One stop 6-page document for program description**
- **Contains requirements and definitions**
- **Consistent format posted on website**
- **Down-loadable with working hyperlinks**
- **Updated for each new call (cycle)**

Highlights

- **RFA process originates with private U.S. company.**
- **National lab PI (sr.) must commit 25% of lab labor to the project.**
- **No more than 25% of any institute share can be subcontracted.**
- **Only accredited U.S. universities already qualified for gov't aid.**
- **Universities must use existing staff to complete project.**
- **INFUSE cannot support graduate students or tuition remission.**
- **No competition with private sector providers or design work.**
- **Intellectual Property Management Plan required with universities.**
- **National Lab cannot be subcontractor to university.**

U.S. Department of Energy (DOE) Office of Fusion Energy Sciences (FES) Notice of Opportunity: INFUSE Public-Private Research Partnership Program Request for Assistance (RFA).

A. Overview

To support fusion energy innovation by companies working to develop fusion energy, DOE-FES will provide fiscal year 2022 funds for partnership awards to assist applicants seeking access to the world class unique expertise and capabilities available across U.S. DOE national laboratories and accredited universities. The objective of INFUSE is to accelerate basic research to develop innovative fusion energy in the private sector.

DOE-FES will accept basic research applications focused on innovation that support development of fusion energy in the following general topic areas:

- Enabling technologies
- Materials science
- Diagnostics
- Modeling and simulation
- Unique fusion experimental capabilities

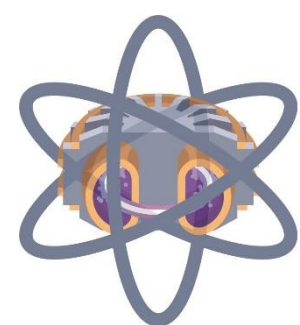
B. Eligibility Requirements and Certifications

Eligible Requester: The purpose of the partnership program is to accelerate the development of fusion energy in the U.S. Accordingly, eligibility is limited to private companies incorporated in the United States of America.

- An eligible requester is a business that is organized according to the laws of any of the 50 states, the District of Columbia, or any U.S. territory or possession. Products embodying intellectual property developed under the assistance must be substantially manufactured in the United States.
- U.S. organized/incorporated requesters with foreign ownership, control, or influence are permitted, but required to sign a DOE-Standard CRADA that may require further negotiation at DOE's discretion only. The transfer of technology and data resulting from the work done under an DOE-FES Award by any recipient to a foreign entity will be subject to U.S. Government export control laws and regulations. The full RFA application must clearly state the nature of the corporate relationship between the foreign entity and domestic subsidiary or affiliate.

Entities not incorporated in the U.S., whether for-profit or otherwise, are not eligible to apply for funding. All work under an INFUSE award must be performed in the U.S. However, applicants may request a waiver of this requirement on the INFUSE Corporate Information Form that is submitted with the full RFA application. This may be required for diagnostic calibrations and installations on international facilities or other justified reasons. This should be noted by checking the waiver box on the form, provide a brief description and enter the percentage of project work performed outside the U.S.

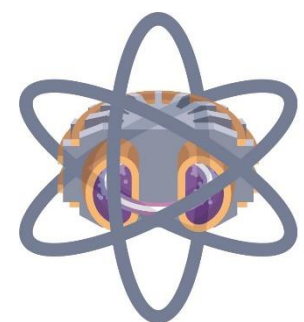
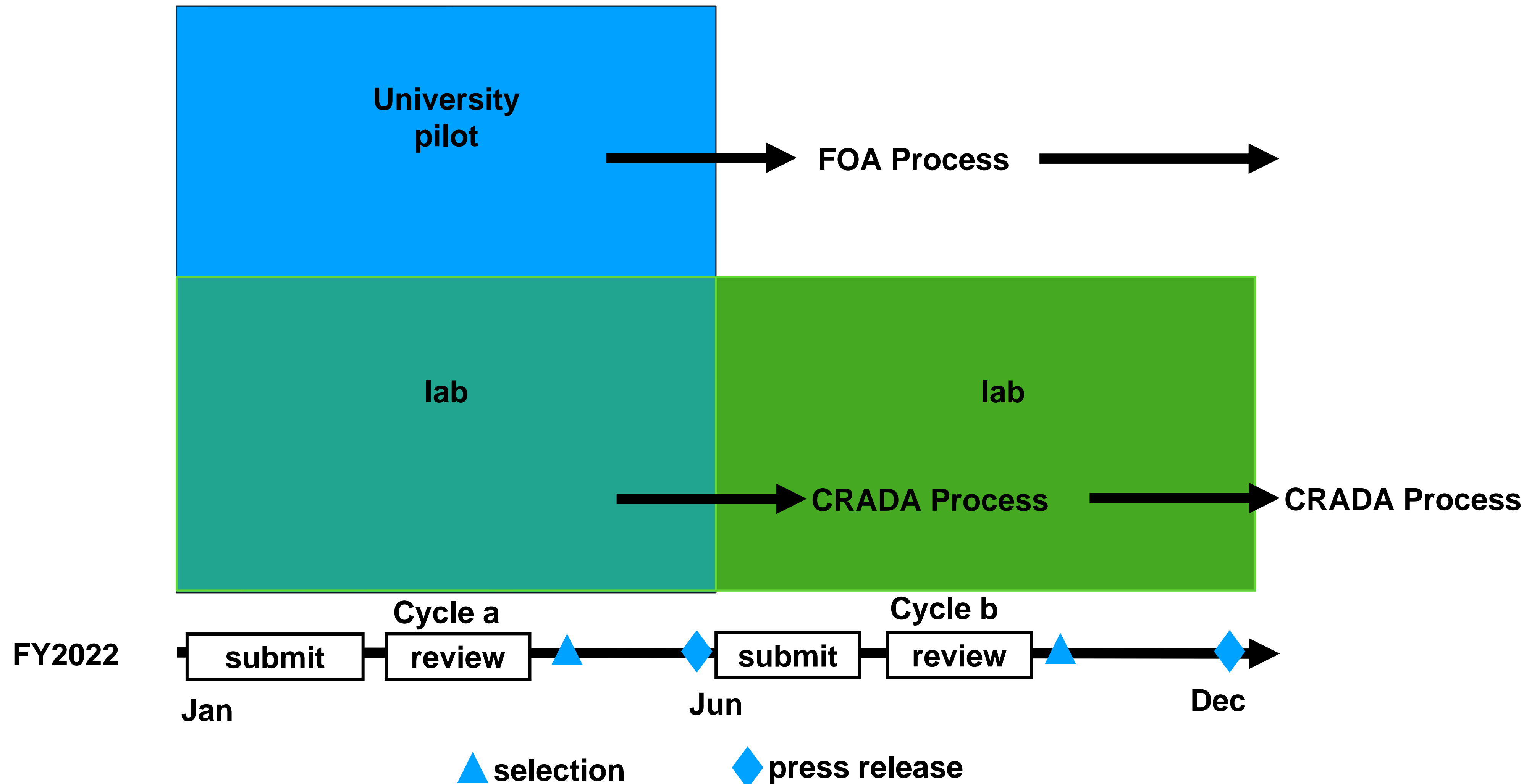
Foreign Affiliation: U.S. incorporated subsidiaries of foreign entities, whether for-profit or otherwise, are eligible to participate in the INFUSE program if they meet the standards established in [2 CFR 910.124](#), which are incorporated by reference into this announcement, and require that the entity's participation be



*credit to Daniel Clark and John Mandrekas of FES for crafting the announcement and vetting it through DOE SC

INFUSE Schedule

- Submission, review & selection process are identical for DOE labs and universities in INFUSE
- Funding process is different for universities and DOE labs. FES manages university FOA; INFUSE manages lab CRADAs



RFA Form Changes

Innovation Network for Fusion Energy (INFUSE) Request for Assistance Application

Status of Assistance Application:

New

Remember - until you click Save & Submit - your submission will not be valid.

RECOMMENDED BROWSERS:

Windows: Chrome
MAC: Chrome or Safari

Project Title:

NOTE: There is a limit of 255 characters for the project title

Brief Project Description:

RFA Number:

RFA2022a-47

Principal Investigator Information

Salutation:

Dr.

First Name:

Last Name:

Phone Number:

Primary Email:

Confirm Email:

Alternate Email:

Company Information & Topic Area


[See supporting document for additional information before answering questions](#)

Company Name:

DUNS Number:


The DUNS number is required. All applying businesses must have a current Dun & Bradstreet number.

INFUSE Corporate Information Form:

 Click here to attach a file

[See supporting document - INFUSE Corporate Information form](#)

Eligible Requestor:

 ☐ Yes, I meet the criteria of an Eligible Requestor

Small Business:

Select...

Topic Area:

Select...

Street Address:

City:


State:

Zip Code:

Terms and Conditions

[See supporting document for additional information before answering questions](#)


Terms and Conditions:

 ☐ Yes, I agree to these terms and conditions.

Technical Narrative

[See supporting document for additional information before uploading proposal](#)


Upload Proposal:

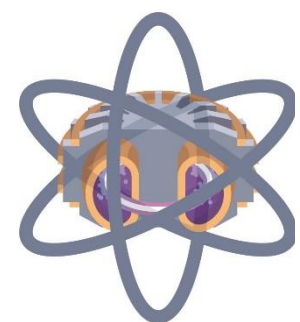
 Click here to attach a file

Record of Discussion

[See supporting document for additional information before uploading RoD](#)


Upload Record of Discussion with Lab PI:


 Click here to attach a file




RFA Form Changes (con't)

Cost Share Estimate
See supporting document for additional information before answering questions

Cost Share Agreement:  ☐ Yes, applicant agrees to provide a minimum of 20% cost share

Upload Budget Estimate:  [Click here to attach a file*](#) **EXCEL FORMAT REQUIRED**
[See supporting document - budget spreadsheet template](#)

Intellectual Property Management Plan (Universities Only)
See supporting document for additional information before uploading IPMP

Upload IPMP:  [Click here to attach a file](#)

Public Institution Preferences

Please identify the preferred national laboratory or university from the pull-down list and point-of-contact for your proposal. If you are working with a university, select university and type the name in the provided field. These are mandatory fields.

Public Institution:

Specific Resource:
(e.g., Spallation Neutron Source)

Institution Point of Contact:

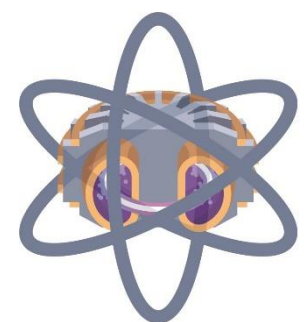
Institution Point of Contact Email Address:

Is the involvement of intellectual property anticipated?

Additional Contact Information
If there are additional Co-PI/Collaborator(s) you wish to identify, please do so below.

Drop down list

AMES
ANL
BNL
FERMILAB
INL
JLAB
LANL
LBNL
LLNL
NETL
NREL
ORNL
PNNL
PPPL
SLAC
SNL
SRNL
University



RFA Form Changes (con't)

Cost Share Estimate

[See supporting document for additional information before answering questions](#)

Cost Share Agreement:



☐ Yes, applicant agrees to provide a minimum of 20% cost share

Upload Budget Estimate:

[Click here to attach a file](#)

EXCEL FORMAT REQUIRED

[See supporting document - budget spreadsheet template](#)

Intellectual Property Management Plan (Universities Only)

[See supporting document for additional information before uploading IPMP](#)

Upload IPMP:

[Click here to attach a file](#)

Public Institution Preference

Please identify the preferred national laboratory or university from the pull-down list and point-of-contact for your proposal. If you are working with a university, select university and type the name in the provided field. These are mandatory fields.

Public Institution

AMES



Specific Resource:

(e.g., Spallation Neutron Source)

Institution Point of Contact



Institution Point of Contact Email Address:



Is the involvement of intellectual property anticipated?

No



Additional Contact Information

If there are additional Co-PI/Collaborator(s) you wish to identify, please do so below:

Record of Discussion

[See supporting document for additional information before uploading RoD](#)

Upload Record of Discussion with Lab PI:

[Click here to attach a file](#)

Cost Share Estimate

[See supporting document for additional information before answering questions](#)

Cost Share Agreement:



☐ Yes, applicant agrees to provide a minimum of 20% cost share

Upload Budget Estimate:

[Click here to attach a file](#)

EXCEL FORMAT REQUIRED

[See supporting document - budget spreadsheet template](#)

Intellectual Property Management Plan (Universities Only)

[See supporting document for additional information before uploading IPMP](#)

Upload IPMP:

[Click here to attach a file](#)

Public Institution Preference

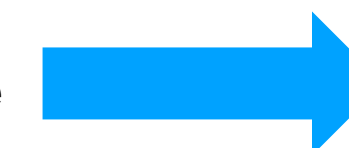
Please identify the preferred national laboratory or university from the pull-down list and point-of-contact for your proposal. If you are working with a university, select university and type the name in the provided field. These are mandatory fields.

Public Institution

University



Type in university name



Specific Resource:

(e.g., Spallation Neutron Source)

Institution Point of Contact

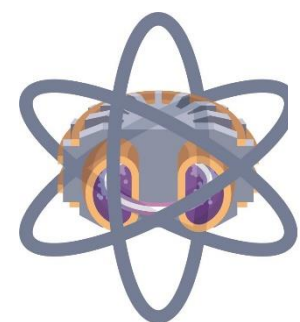


Institution Point of Contact Email Address:

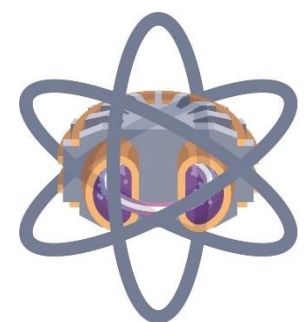
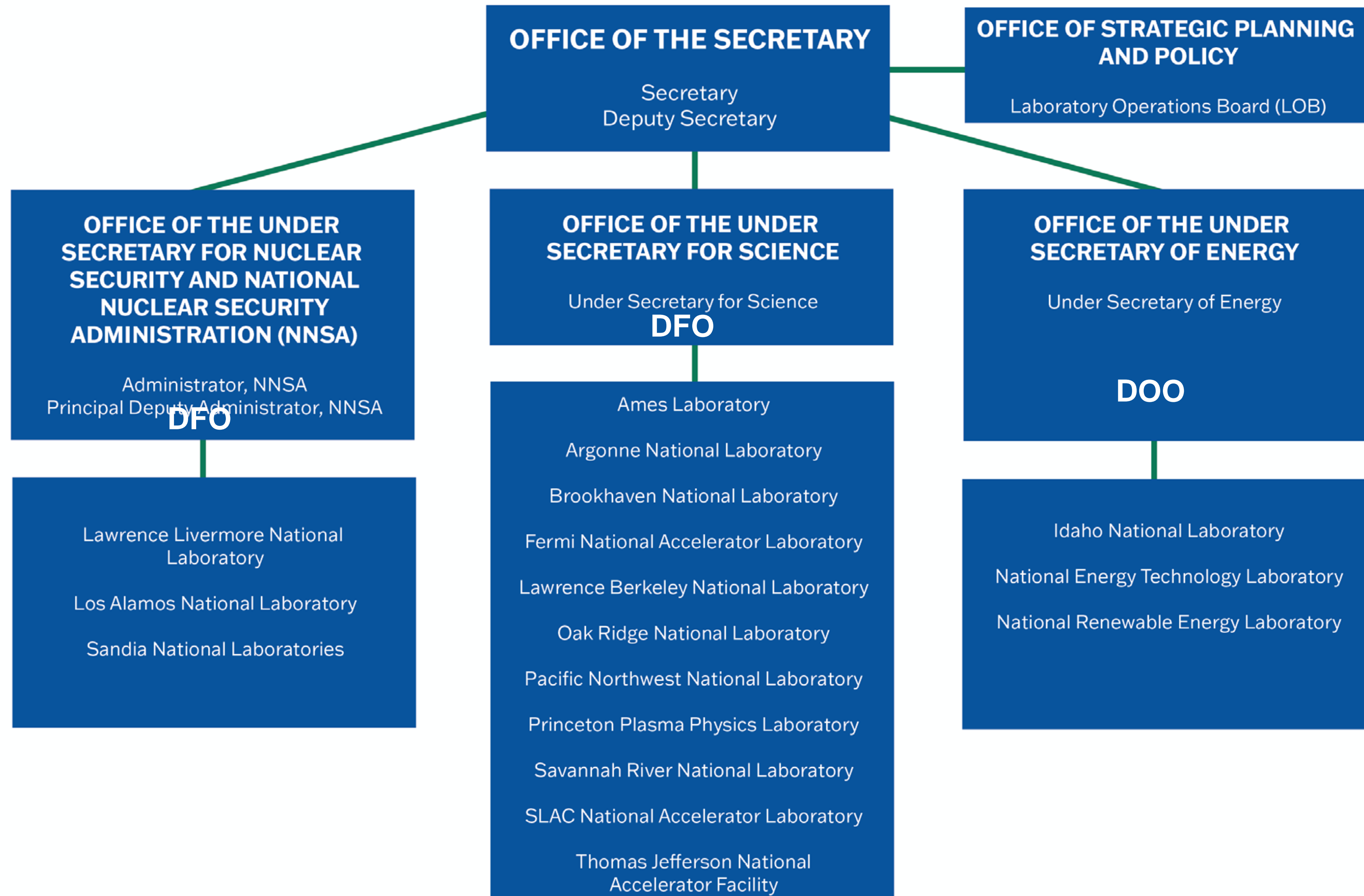


Is the involvement of intellectual property anticipated?

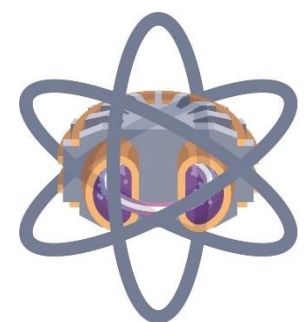
No



DOE National Labs



DOE National Labs



DOE Site Offices – CRADA approvals

SC

- Ames Site Office (AMSO)
- Argonne Site Office (ASO)
- Bay Area Site Office (BASO) at LBNL
- Brookhaven Site Office (BHSO)
- Fermi Site Office (FSO)
- Oak Ridge National Laboratory Site Office (OSO)
- Pacific Northwest Site Office (PNSO)
- Princeton Site Office (PSO)
- Bay Area Site Office (BASO) at SLAC
- Thomas Jefferson Site Office (TJSO)

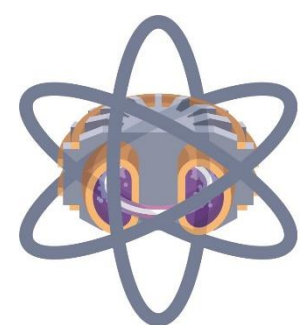
NNSA

NNSA HQ – Albuquerque
Field Offices – LANL, LLNL, SNL
Site/Operations Office – SRS/SRNL

Energy

Golden Field Office - NREL
Idaho Operations Office – INL
Multiple Field Offices - NETL

***DOE Sites and Plants are not national labs**






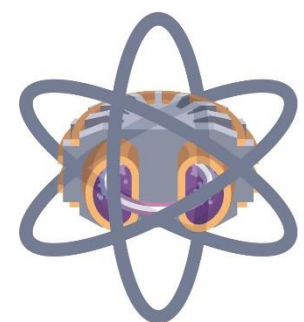
****Number of INFUSE POCs will remain at 10**

INFUSE will work directly with PIs and SPP officials at the other 7 labs as needed

Budget Worksheet Example

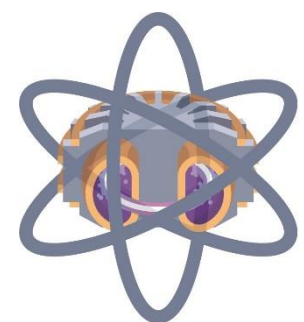
***Only a spreadsheet is acceptable for upload**

AutoSave <input type="checkbox"/> Off    INFUSE Example Budget Estimate.... - Saved <input type="text" value="Search"/>				
File Home Insert Page Layout Formulas Data Review View Help Acrobat				
F20	<input type="text"/> <input type="button" value="X"/> <input type="button" value="✓"/> <input type="button" value="fx"/>			
	A	B	C	D
1	item	institute (\$)	company costshare (\$)	Description
2	Personnel			labor hrs or fte - fully loaded costs per individual
3	individual 1	\$141,000.00		.25 fte (470 hrs) of institute PI for computations
4	individual 2		\$36,000.00	.15 fte (270 hrs) of company PI for data analysis
5	individual 3		\$31,000.00	.2 fte (360 hrs) of company institute staff for expt operations
6	individual 4	\$14,250.00		.05 fte (95 hrs) lab post-doc for measurements
7	technician/support	\$19,000.00	\$14,000.00	other misc. support
8	Equipment			list equipment costs
9	item 1	\$1,200.00		digital balance
10	item 2	\$3,200.00		optical microscope
11	Materials and Supplies			list major expendable item costs
12	item 1	\$500.00		steel tubing
13	item 2	\$1,300.00		W powder
14	Travel			estimate travel expenses per trip
15	trip 1		\$1,600.00	institute visit
16	trip 2	\$1,800.00	\$1,800.00	XYZ conference
17	Subawards/Subcontracts			each subcontract requires similar breakout to this table
18	University of XYZ contract		\$50,000.00	faculty/student support
19	Company ABC		\$4,500.00	property measurements
20				
21	Other			other costs or fees
22	Subtotal	\$182,250.00	\$138,900.00	
23				
24	* (add lines as needed under each item category)			



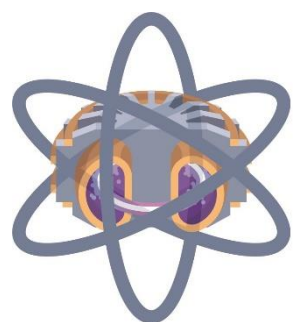
Budget Example (con't)

24	* (add lines as needed under each item category)			
25	Subcontractors			
26	item	University (\$)	company ABC (\$)	Description
27	Personnel			labor hrs or fte - fully loaded costs per individual
28	individual 1	\$30,000.00		.05 fte (95 hrs) of professor support for theory
29	individual 2	\$18,400.00		1 fte (270 hrs) of student support for calculations
30	individual 3		\$2,400.00	.01 fte (20 hrs) of vendor support for measurements
31	Equipment			list equipment costs
32	item 1			
33	item 2		\$2,000.00	equipment usage fee
34	Materials and Supplies			list major expendable item costs
35	item 1		\$100.00	sample holders
36	item 2			
37	Travel			estimate travel expenses per trip
38	trip 1	\$1,600.00		institute visit
39	trip 2			
40				
41	Other			other costs or fees
42	Subtotal	\$50,000.00	\$4,500.00	
43				
44				



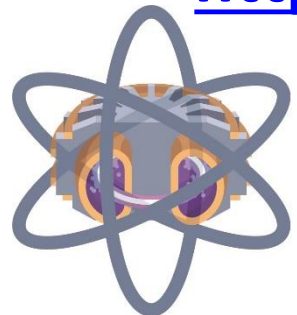
Record – of – Discussion

- **Involve all senior members identified in the SOW**
- **Show agreement by all senior members including subcontractors**
- **Include agreement of schedule and disposition of equipment**
- **Include signatures of both PIs (required) indicating management support**
- **Institute PI's manager signature required if using specific facility**



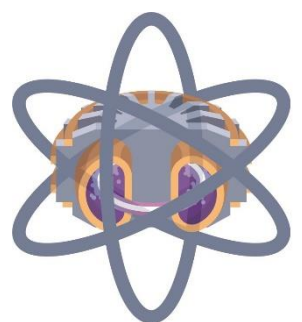
Next RFA Call

- Opens 1st week of January – week of January 03, 2022
 - Same 5 topical areas
 - Limit of 5 RFAs per company
 - Please consider previous reviews if resubmitting an RFA
-
- **2nd call 2021 INFUSE awardees publicly posted yesterday.**
<https://www.energy.gov/science/articles/departments-energy-announces-second-round-fy-2021-public-private-partnership-awards>
-
- **Universities: please add contact info to INFUSE database at:**
https://docs.google.com/spreadsheets/d/18sO7uXqs_jO2ySYc3QtZ7l8ypWj025KFHawLY2X5Co/edit?usp=sharing



Next Workshop (~Dec. 2022)

- **University capabilities session – please let us know your interest!**
- **Lab capabilities session for the 7 national labs just added**
- **Any new developments in fusion public-private partnerships**
- **Reports on completed 2020 and 2021 INFUSE projects**
- **Private company research needs - networking**
- **Ideas for venue: collocate with ARPA-e? GAIN/ARDP? EPRI? other?**



Need for improvement

- Notifications and press releases
- CRADA processing
- Final reports and metrics

Workshop feedback form at <https://forms.gle/q6yEDrZPXQjnzLPL8>

General feedback form at <https://infuse.ornl.gov/what-is-infuse/>

