



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Nuclear Science User Facilities

Nuclear Energy Infrastructure Database (NEID)

New Version

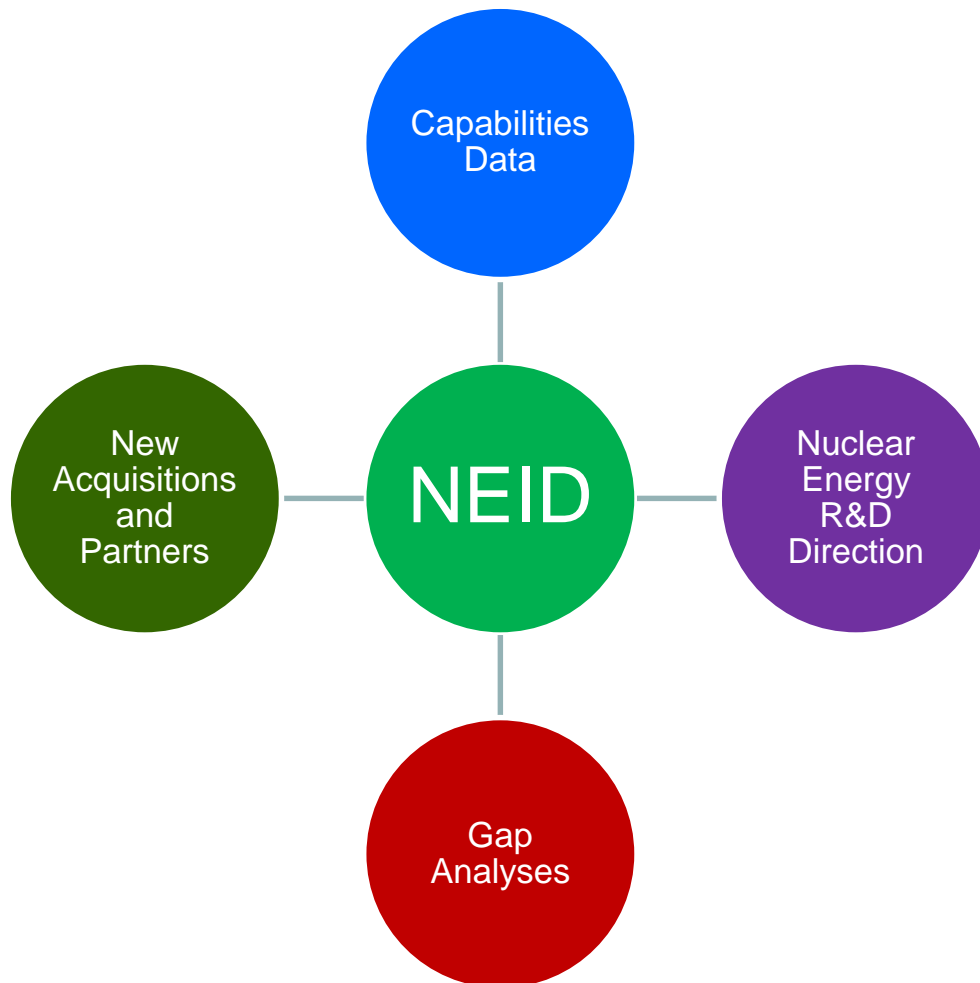
Jonathan Kirkham

Scientific Support Professional



NSUF Annual Review
DOE Headquarters
November 1, 2016

- Introduction
- Program Support
- Access
- Structure
- Current Data
- What's New?



■ **Resource for a variety of the nuclear energy groups:**

- Nuclear Energy Research Community
 - Aiding their search for capabilities on current or future projects
- Office of Nuclear Energy
 - Aiding in infrastructure investment decisions
- NSUF Technical Leads
 - Aiding in the search for the best and most cost effective capability available





■ NEID provides support for the following areas:

- Gap Analysis Report
- Nuclear Energy Request For Information (RFI)
- Nuclear Energy Infrastructure Funding Opportunity Announcements (FOA)



■ Website:

- nsuf-infrastructure.inl.gov/

■ NSUF Main Page:

- nsuf.inl.gov/





U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Access



Home Page - NSUF
https://nsuf.llnl.gov



ABOUT US
USERS ORGANIZATION
PUBLICATIONS
PROJECTS
CALL/SOLICITATION INFORMATION
MY NSUF
INFRASTRUCTURE
LOG ON

Users Meeting
What to expect at this one-of-its-kind workshop
READ MORE →

NEID Access





U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Structure



Infrastructure Jonathan Kirkham

[Home](#)
[Browse](#)
[Search](#)
[Admin](#)
[Lists](#)

[NSUF](#) / [NEID](#)

Nuclear Energy Infrastructure Database (NEID)

Use this management program to find facilities or instrumentation at national laboratories, universities or industrial R&D facilities.

Nuclear Fuels and Materials Library (NFML)

Use this management program to access irradiated materials from NSUF experiments and other legacy sources. The library houses available specimens for awarded NSUF-1/NSUF-2 CINR FOA proposals and awarded NSUF Rapid Turnaround proposals.

Quick Search

Other Searches

[Institutions](#)
[Facilities](#)
[Instruments](#)
[Nuclear Fuels and Materials Library](#)



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Structure

NSUF Infrastructure Jonathan Kirkham

NSUF / NEID / Browse Institutions

Home
Browse
Institutions
Projects/Materials
Search
Admin
Lists

10

Search...

Institution	Owner	State	Region	Country
Babcock and Wilcox Nuclear Operations Group	Industry	VA		United States of America
Babcock and Wilcox Technical Services Group	Industry	VA		United States of America
Bechtel-Bettis	Dept of Defense	PA		United States of America
Best Theratronics	International Industry	ON		Canada
Boise State University	University	ID		United States of America
Brookhaven National Laboratory	Dept of Energy	NY		United States of America
California Institute of Technology	University	CA		United States of America
Canadian Nuclear Laboratories (formerly AECL)	International Government	ON		Canada
Center for Advanced Energy Studies (CAES)	University	ID		United States of America
Center for Advanced Engineering and Research (CAER) (Bedford County, VA)	US State Government	VA		United States of America

Showing 11 to 20 of 130 entries

Previous 1 2 3 4 5 ... 13 Next

+ Add a New Institution

After Clicking Here



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Structure – Institution



NSUF Infrastructure Jonathan Kirkham

NSUF / NEP / Browse Institutions / Center for Advanced Energy Studies (CAES)

Home
Browse
Institutions
Projects/Materials
Search
Admin
Lists

Name Center for Advanced Energy Studies (CAES)
Owner Type University
State Idaho
Country United States of America
Agreement State No
Website <https://caesenergy.org/>

[View All Instruments](#) [Edit](#)

Facilities

10

Search...

Facility	Abbreviation	Facility Type(s)
Advanced Materials Laboratory	AML (CAES)	Sample Preparation
Advanced Transportation Laboratory	ATL (CAES)	Sample Preparation
Advanced Visualization Lab	AVL	Modeling and Simulation
Analytical Chemistry Laboratory	ACL (CAES)	Radio-chemistry
Analytical Instruments Laboratory	AIL (CAES)	Special NE Research
Fluids Laboratory	FL	Special NE Research
Microscopy and Characterization Suite	MaCS	Post-irradiation Examination
Radiochemistry Laboratory	RL	Radio-chemistry, Hot Cell

Showing 1 to 8 of 8 entries

Previous 1 Next



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Structure – Facility



nsuf Infrastructure

Jonathan Kirkham

nsuf / NSUF / Browse Institutions / Center for Advanced Energy Studies (CAES) / Microscopy and Characterization Suite

Home

Browse

Institutions

Projects/Materials

Search

Admin

Lists

Institution [Center for Advanced Energy Studies \(CAES\)](#)

Name Microscopy and Characterization Suite (MaCS)

Building CAES

Primary Type Post-irradiation Examination

Core Functions The Microscopy and Characterization Suite (MaCS) is a state-of-the-art materials characterization laboratory that provides cross-cutting capabilities that support the Center for Advanced Energy Studies (CAES) mission in multiple initiative areas.

Network Facilities https://portal.hhi.gov/portal/server.pt/community/caes_home/261/macs_operating_envelope_1282429

Support Equipment CAES also houses the Advanced Materials Laboratory, Radiochemistry Laboratory and other non-rad labs.

Materials Allowed beta/gamma only

Sample Encapsulation ~ 70 dpm/100 cm² 5 and 7 dpm/100cm² alpha

Atmosphere air

Commissioning Date 2008

NRC License NRC

User Facility Yes

User Org Web Page <https://caesenergy.org/>

Proposal Web Page <https://atnnsuf.in.gov/>

Cost To Maintain 1,000,000

Cost To Replace 8,000,000

GAIN Partner No

NSUF Partner Yes

NE Use Percentage 50-70

Funding Sources DOE-NE (NSUF)

- NE Objectives**
- Support the current fleet of current reactors
 - Support development of advanced reactors
 - Develop and maintain an integrated ROAD framework

Utilization Hours 2000

Number Of Staff 7

Scheduling Web Page <https://caesenergy.org/research/laboratories/macs/>

Point Of Contact Joanna Taylor

Email jrtaylor@uidaho.edu

Address 1 995 University Blvd.

Address 2 995 University Drive

City Idaho Falls

State Idaho

Zip 83415

Website URL <https://caesenergy.org/research/laboratories/macs/>

- Data Sources**
- Facility Site web page
 - INL TYSRs
 - DOE Facilities Inventory Draft (6.16.2014)

Date Of Data April 22, 2015



Instruments

Abbr	Name	Type
AFM	Nanoscope and Atomic Force Microscope	Mechanical Properties
FIB	Focused Ion Beam with EDX/EBSD/Composite (IMACS)	Microscope
LEAP	Local Electrode Atom Probe	Microscope
SEM	JSM Scanning Electron Microscope (SEM) with EDX/EBSD/CL (IMACS)	Microscope
XRD	X-Ray Diffractometer (IMACS)	Crystallography
SEM	FEI Scanning Electron Microscope	Microscope
ST-STEM	Stere Scanning Transmission Electron Microscope	Microscope
STEM	Philips Scanning Transmission Electron Microscope	Microscope
	Nanoscope	Microscope
PIPS	Precision Ion Polisher System	Sample Preparation
PECS	Precision Etching and Cleaning System	Sample Preparation
PIPS	PIPS (new 10/2014)	Sample Preparation
	Pave Technologies Giga 2000 Vibratory Polishers	Sample Preparation
	Buehler MetWet 1500 Polishing Grinder	Sample Preparation
	Buehler JetMet Low Speed Saws	Sample Preparation
	AnaTech Instrumentation systems	Sample Preparation
	Thermal Technology High Temperature Vacuum Furnace	Thermal Properties



Structure – Instrument



11



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Current Data



Data as of September 2016

Institutions	Facilities	Instruments
127	465	963

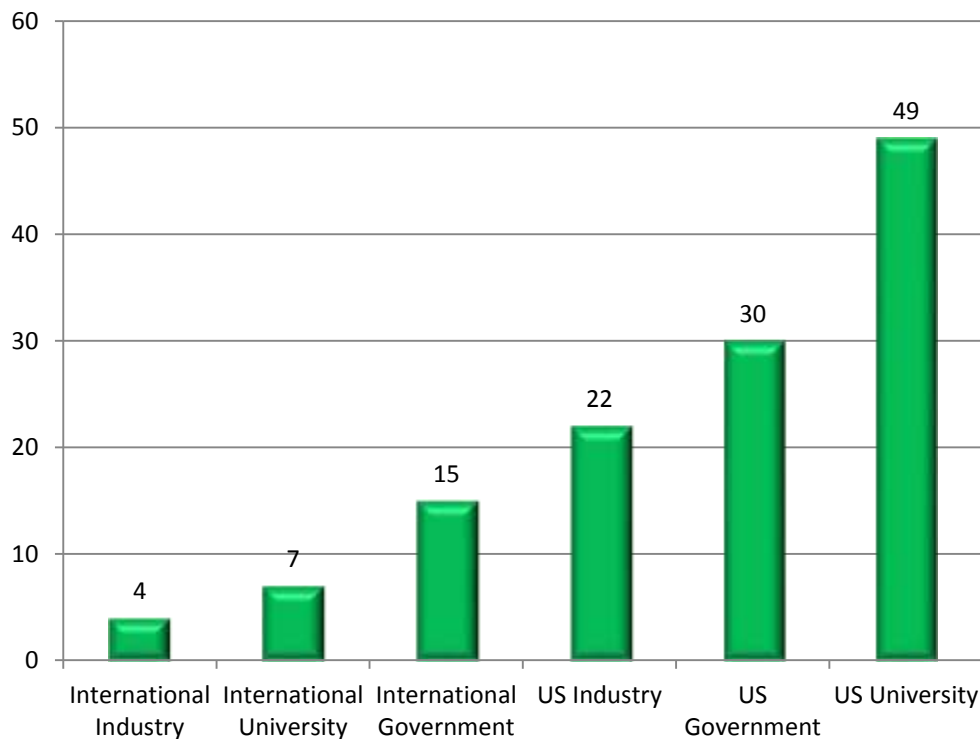
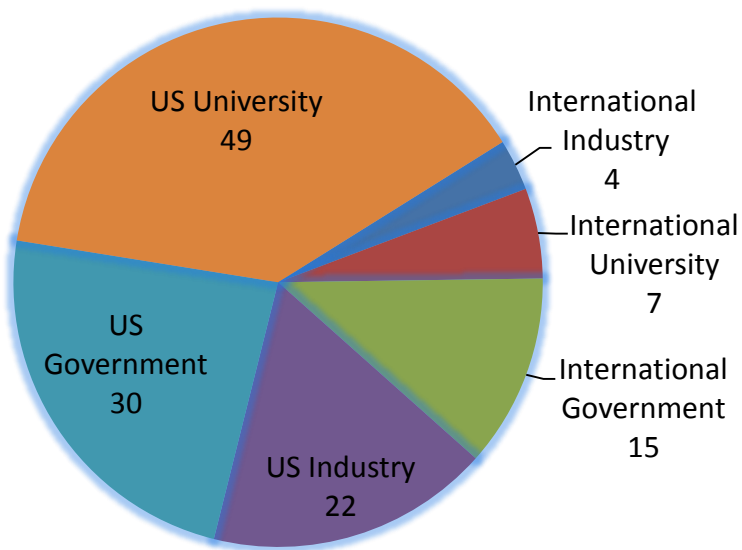


TEM





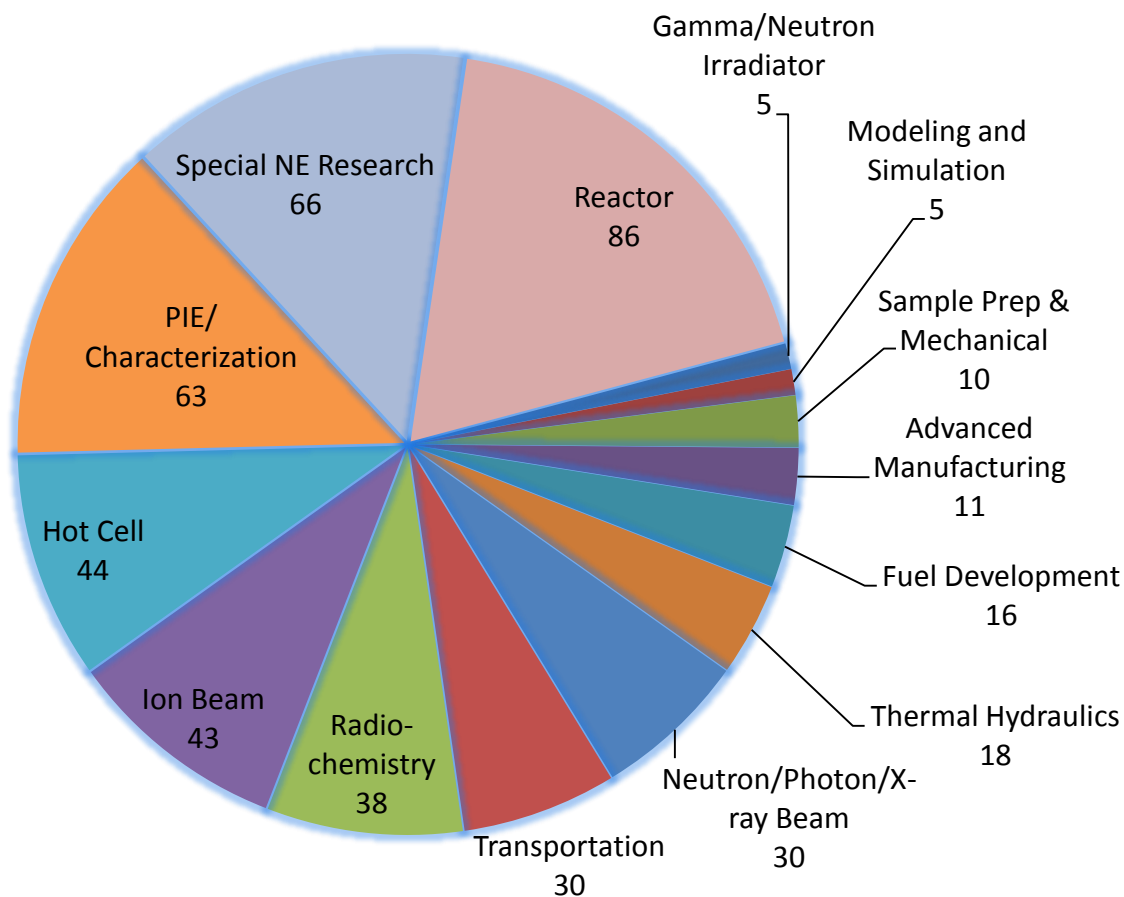
Institutions





Current Data

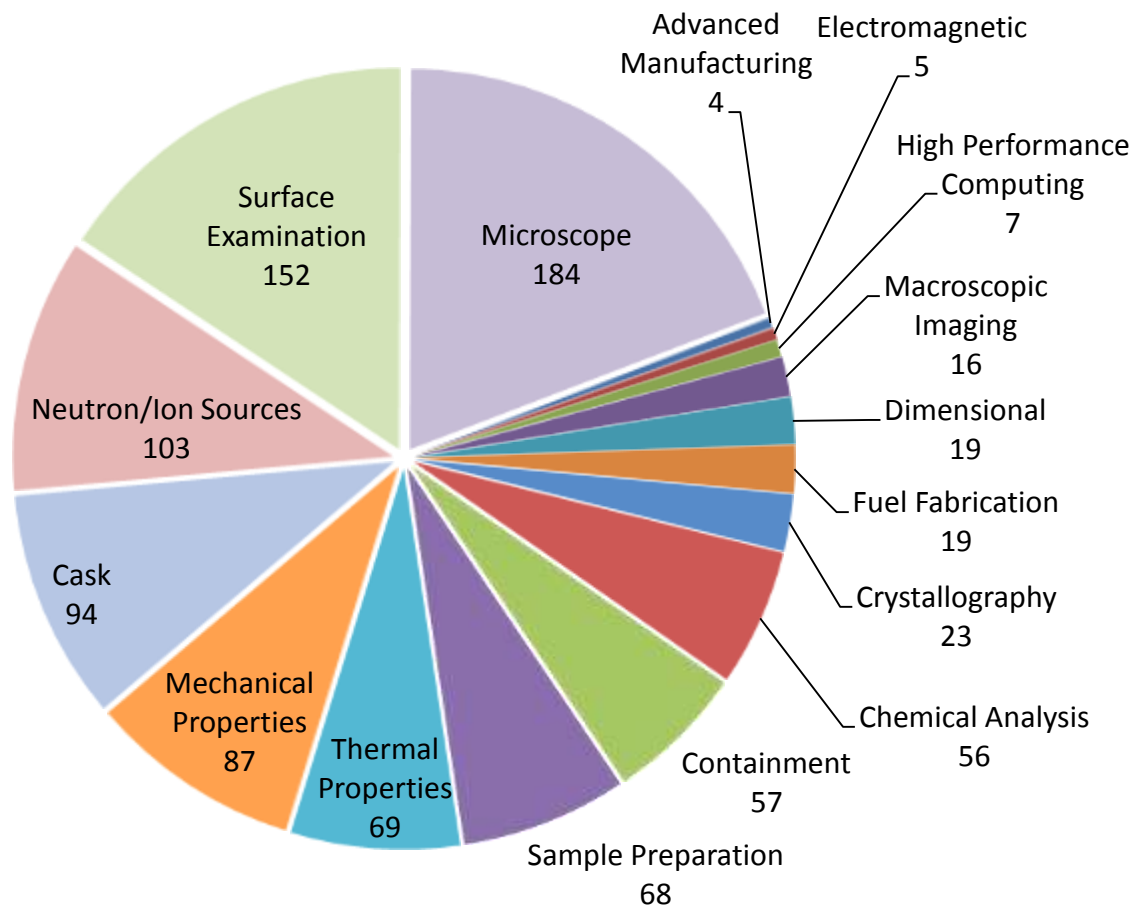
Facility Types





Current Data

Instrument Types



What's New?

- **All new look, feel, and navigation properties**
- **Editing capabilities for institution officials and facility owners**
 - Users can now edit their own data (pending our approval)
- **New coordinate map through Google Maps**
- **User profiles are all connected throughout all NSUF databases**
 - Users can sign up through NSUF main webpage instead of the NEID page
- **Ability to save a list of your favorite facilities or instruments for quicker access**

