

Collaborating with Department of Energy National Laboratories & Working with Argonne

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Introduction to National Laboratories

- What is a “national laboratory”?
Facility overseen by federal agency for the purpose of advancing science and technology, in furtherance of specific agencies’ missions; oftentimes, the labs under a particular agency are to some degree networked
- What is a Federally-Funded Research and Development Center (FFRDC)?
 - Subset of “national laboratory”
 - Public-private partnership to conduct research on behalf of the federal government
 - Administered by universities and corporations



Introduction to National Laboratories

- What do national labs offer?
 - Research infrastructure/world-class facilities
 - People/expertise
 - Tech transfer
 - Prospective funding *source* as well as partner to compete for federal funding
- Challenges of working with national labs
 - Varying structures and oversight bodies
 - Limited generationalizations between labs
 - Lack of transparency



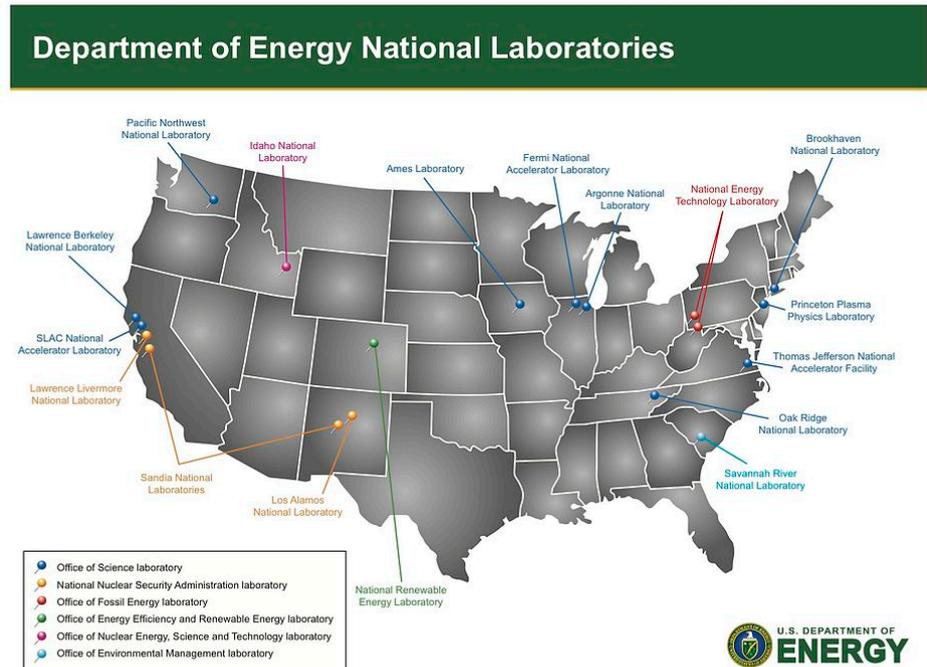
Department of Energy

- Mission to advance energy technology and promote related innovation in the United States
- Variety of research funding programs, spanning basic and applied research
- Research portfolio includes classified programs related to national security (often nuclear related)



Department of Energy National Labs

- 17 national laboratories
- Been around for awhile, some since WWII
- Geographically dispersed (across 14 states)
- Different scientific focuses
- Different management structures and cultures
- Lab vs. lab management vs. DOE
- Operate as both sponsors and collaborators



Northwestern & Energy

- Energy is a hot topic on campus
- Home to two DOE-Funded Energy Frontier Research Centers (EFRCs)
 - Involved in others as a subcontractor
- Two national labs nearby
 - Argonne
 - Fermi
- Numerous interactions with national labs
- ISEN & NAISE



Current NU-DOE lab Interactions

- Over the last ~15 years, Northwestern has engaged in sponsored research with the following:
 - Argonne National Laboratory
 - Fermi National Laboratory
 - Sandia National Laboratory
 - Lawrence Livermore National Laboratory
 - Oak Ridge National Laboratory
 - Los Alamos National Laboratory
 - Idaho National Laboratory
 - Pacific Northwest National Laboratory



Argonne National Lab

- Established 1946
- Largest national lab in the Midwest
- 25 miles southwest of Chicago
- Managed by the University of Chicago
- Areas of research
 - Physical science
 - Life science
 - Environmental science
 - Energy science
 - Photon science
 - Data science



Argonne National Laboratory campus



Northwestern & Argonne

- Collaborative Research (funded and unfunded)
 - JCESR
 - EFRCs (ANSER, CEES-II)
 - NIST CHiMaD
- Incoming awards
- Outgoing subawards
- Joint appointments (in both directions)
- NAISE
- Facility Usage/Management (LS-CAT/DND-CAT)



Basic Ordering Agreement

- Operates as a “master agreement” between a lab and another research institution/university
- Typically flows lab funding and/or DOE funding to the collaborating research institution/university
- Northwestern has BOAs with 2 national labs – Argonne & Los Alamos
- At Northwestern, the BOA is heavily utilized by Argonne to support graduate student support



Highlights of Northwestern-Argonne BOA

- Basic Ordering Agreement No. 3J-30081
- Intended to support unclassified research and development activities
- Runs May 1, 2013 through April 30, 2018
- Cost-reimbursable, no-fee
- Keep in mind these awards come through as contracts, not grants
- \$10,500 for tuition (based on full year)
- Signed by Jay Walsh, Vice President for Research



Highlights of Northwestern-Argonne BOA

- Travel
 - All travel not included in the cost proposal must be approved in advance by Argonne's procurement representative
 - Foreign travel must be approved in advance *even when included in the cost proposal*
 - Mileage Reimbursement
 - Total mileage between the starting point of travel and the ending point must be 50 miles – anything less is not typically reimbursable
- Certain other items will require explicit approval if not proposed
 - Equipment
 - Subawards



Request for Proposal under the BOA

- Initiated by conversations between PI and Argonne technical representative (“behind-the-scenes”)
- Issued by an Argonne Procurement Official to OSR directly
- OSR forwards the RFP notice directly to the department
- Final deadline usually within three to four business days from notification
- No solicitation, submission requires the following items:
 - Signed Contract Pricing Proposal (Budget)
 - Detailed basis for cost proposal
 - Signed and completed Pre-Award Booklet



Request for Proposal under the BOA

- Pre-Award Booklet
 - Basic information about Northwestern, including accounting information (e.g., DS-2)
 - Also information regarding the PI's proposal and research
- Following questions to be answered by PI:
 - (3) Radiation Materials/Devices
 - (4) Performance of Work Location
 - (5) Protection of Data
 - (12) Beryllium Machining or Processing
 - (14) Representation of Limited Rights Data and Restricted Computer Software
 - (16) Buy American Act - Supplies



Small Business Contracting Plan

- Small Business Act, 15 USC 637, stating that small business concerns shall have the maximum practicable opportunity to participate in performing contracts or subcontracts led by any Federal Agency.
- Required when a subcontract is in the amount of \$650,000 or more
- Reflects the maximum practicable participation by small businesses
- Contracting plan is completed by NU's Purchasing Services Department



Work Orders under the BOA

- Mechanism that funds each project
- BOA is explicitly referenced in award
- Projects can outlast current BOA, but new work should be funded under future BOA
- Arrives from Argonne Procurement official after submission of the cost proposal and pre-award booklet.
 - Includes the agreed upon Statement of Work, Period of Performance, and ceiling price.
 - Requires signature by OSR Authorized Organization Representative
 - Work can begin only after work order is signed by both parties
- No prespending allowed!



Flavors of Funding

- “Standard” Research Funding
 - Statement of Work
 - Budgeted like any other proposal
 - Fringe benefits
 - PI/RAS tuition rate
 - Applicable F&A rate
 - Typically involved at formal proposal stage
 - Could be internal ANL DOE funds, could be a proposal in response to a formal call



Flavors of Funding

- Graduate Student Support
 - Sometimes, these participantships run outside of OSR
 - Running through OSR - primarily international students
 - Statement of Work
 - Budget
 - Stipend
 - Tuition (\$10,500 annually)
 - No F&A
 - Sometimes/infrequently, services, supplies, and travel may be included
 - Funds cannot be rebudgeted out of stipend and tuition for any other costs



Flavors of Funding

- Laboratory Directed Research and Development (LDRD)
 - A portion of the laboratory's budget is set aside every year for research efforts that involve work being proposed from Argonne Scientists and not from outside sources
 - It is a good program to promote independent development of different ideas
 - “Seed funding”



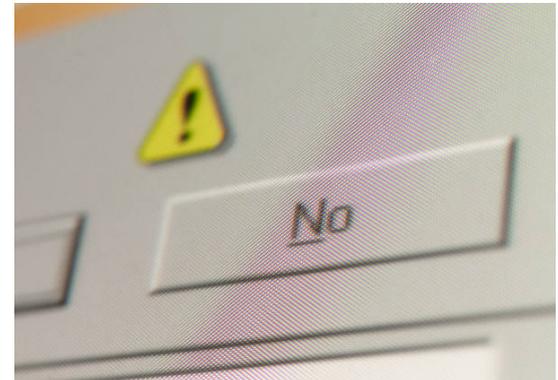
LDRD Budget Do's

- Salary & fringe benefits (i.e., effort)
- Materials and supplies
- Equipment not readily available at either organization
- Travel, including workshops
- Consulting
- Applicable F&A



LDRD Budget Don'ts

- Cannot be used to ...
 - Supplement any existing DOE program
 - Training/education activities
 - Fund student tuition
 - Purchase computer equipment
except in very rare circumstances
 - To develop an invention for tech transfer or commercialization



Northwestern-Argonne Institute for Science and Engineering (NAISE)

- Two organizations linked to create a new space for studying science and engineering
- Leadership from both Northwestern and Argonne
- Focused on foster research collaborations in particular academic fields
- Provide students with unique educational opportunities
- Enables Argonne investigators to hold faculty appointments as “Institute Fellows” at Northwestern
 - Appointments allow them to submit proposals and perform work on resulting awards ***without the use of subcontracts***



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NAISE - Argonne Institute Fellows

- Argonne Institute Fellows are included with salary as a line-item on the sponsor budget
- Salary and fringe benefits are based on Argonne institutional base salary and fringe benefits rate
- Indirect costs are budgeted at the applicable rate on using Northwestern's negotiated F&A rate
- Budget justification introduces NAISE as a platform for Argonne investigators to serve as Northwestern investigators on proposals and resulting awards



- ***Process only applies to proposals running through NAISE***

ANL Institute Fellows - Award Stage

- Award follows standard award review, negotiation (as applicable), and award set-up process
- Once internal spending authority is established, investigator spends at Northwestern as any Northwestern investigator would
- Mechanics and process associated with charging Argonne effort



Questions?

