

MSU INVESTMENT PROPOSAL FOR INSTITUTIONAL PRIORITIES

PROPOSAL OVERVIEW

Title	Base Funding for ERI	Request Date	11/14/2011
Department	The Energy Research Institute	Email	spangler@montana.edu
Requestor	Lee Spangler	Phone	4399

STRATEGIC ALIGNMENT

Core Themes
and Objectives
(check all that
apply)

Educate Students

- ☒ Our graduates will have achieved mastery in their major disciplines
- ☐ Our graduates will become active citizens and leaders
- ☐ Our graduates will have a multicultural and global perspective
- ☐ Our graduates will understand the ways that knowledge & art are created and applied in a variety of disciplines
- ☐ Our graduates are prepared for careers in their field
- ☐ We will provide increased access to our educational programs
- ☐ Communities and external stake holders benefit from broadly defined education partnerships with MSU

Create Knowledge and Art

- ☒ Students, faculty, and staff will create knowledge and art that is communicated widely

Serve Communities

- ☐ We help meet a fundamental need of the citizens of Montana by providing degree programs for our students
- ☐ We help meet the educational needs of the citizens of Montana by providing a wide range of educational opportunities to a variety of students
- ☒ Our students, faculty, staff, and administrators reach out to engage and serve communities
- ☐ Our students, faculty, staff, and administrator reach in to build the university community

Integrate Learning, Discovery, and Engagement

- ☐ Each graduate will have had experiences that integrate learning, discovery and engagement
- ☐ Outreach activities will educate students and address the needs of the communities we serve
- ☒ Students, faculty, and staff will create knowledge and art that addresses societal needs
- ☒ MSU is a community that will be characterized by synergy within and across disciplines, roles and functions.

Stewardship

- ☐ The public trusts the institution to operate openly and use resources wisely
- ☐ The faculty and staff are well-qualified and supported
- ☐ MSU will support Native American students, programs, and communities
- ☐ MSU will be an inclusive community, supporting and encouraging diversity
- ☒ Our publicly provided resources are used efficiently and effectively
- ☐ Natural resources are used efficiently and sustainably
- ☐ MSU nurtures a culture of resource conservation and ecological literacy among students, faculty and staff
- ☐ Our physical infrastructure (e.g., building, equipment, open spaces) will be well-maintained and useful

INSITUTIONAL BENEFIT**Campuses**☒ Bozeman ☐ Billings ☐ Havre ☐ Great Falls ☐ FSTS ☐ Extension ☐ MAES**Cross Depts**

Please List:

TIMEFRAME**Proposed Dates**

Start:

End:

COST AND REQUIREMENTS

Funding Type	One-Time (\$)	Multi-Year (\$)			Base (\$)	FTE
		Year 1	Year 2	Year 3		
Personnel (w/benefits)					\$50,000	0.5
Materials & Supplies						
Travel						
Contracted Services						
Capital						
Other Operations						
TOTAL					\$50,000	

Funding is requested for a partial FTE Associate Director of the Energy Research Institute (ERI) and for partial FTE administrative support for ERI.

Please comment, if
necessary, regarding
cost and
requirements.

PROPOSAL SCOPE

In 2010 the Energy Research Institute had Sponsored Program expenditures in excess of \$15 M and a total of 230 paid participants (not FTE) in projects involving a broad spectrum of energy related research (see Table).

2010	Expenditures	F&A	Faculty	Professional	Grad	Undergrad	Classified
Biofuels	2,235,242	483,119	12	18	15	21	6
CCS	10,881,603	772,554	18	30	14	10	3
Control	127,797	30,948	2		2	1	
Efficiency	32,901	4,087		3		1	2
Environ.	509,847	86,134	4	2	3		
Fuel Cells	956,563	235,751	6	9	17	7	
Hydrogen	355,822	95,921	1	2	4	8	1
Solar	210,612	21,540	1			1	
Wind	528,858	144,636	2	3	6	9	
Total	15,839,245	1,899,019	46	67	61	58	12
Total w/o duplicates			43	62	60	54	11

The research areas include projects directed by multiple PIs some of which ERI provided no direct support in producing the proposal or managing the project. However, programs directly run out of ERI represent over \$10 M of the current effort. Historically the ERI or its predecessor program has generated over \$50 M in funding in the time period from 1/1/02 – 12/31/10 resulting in numerous student research opportunities. Additionally these funds have helped in bridge hiring new faculty and equipping their laboratories directly assisting in four hires in ECE, Earth Sciences and M&IE. Through these projects ERI has also provided early career funding opportunities for an additional five faculty in their first two years of service at MSU and provided new research opportunities for multiple mid-career faculty.

These benefits have largely derived from ERI leadership researching funding opportunities for larger multidisciplinary groups of PIs, assembling the investigators into a proposal writing team, leading the proposal production effort, and in many cases, managing the projects when funded. For much of this effort proposal development, budgeting, project management, accounting, and reporting were performed by a small team of the ERI director (0.75 FTE position), an accountant and an administrative assistant.

Recently ERI has succeeded in getting a large scale carbon sequestration project funded by DOE at \$67 M with a private sector match of \$18 M. The ERI Director is the project director for this eight year, thirteen institution, \$85 M dollar project. While this project represents growth and a major step forward for MSU and ERI, duties associated with this effort limit the director's ability to contribute in other areas and could have a negative impact on the growth and positive benefits generated by ERI in other energy fields. ERI seeks a two pronged approach to maintain positive momentum for all energy related research: 1) Two project managers are being hired for (and paid by) the large scale sequestration project to attempt to free up some of the project director's time and 2) ERI is seeking base funding to help support an Associate Director and support personnel to help continue the effort.

PROPOSAL SCOPE

If funded, the ERI Director and Associate Director will work together to continue to identify funding opportunities, faculty teams to apply to the opportunities, lead the proposal assembly effort and provide other support in this process. Emphasis will be placed on involving early career faculty and mid-career faculty moving in new, potentially more productive directions. Funding for student researchers contributing to proposed projects will remain a high priority.

Additionally, ERI has potential to play a larger role in the instructional program. The importance of energy and its interdependence with the environment, economy, and climate is a very fertile ground for developing course content in science, engineering, economics, political science and other social science. This content could either be entire courses or course components.

ADDITIONAL INFORMATION


After funding notification ERI would immediately conduct an internal search for a part time (0.33 – 0.5) Associate Director. Required and preferred qualifications would include demonstrated ability to lead multi-investigator proposal efforts and ability to work productively in interdisciplinary teams.

Depending on salary requirements for the Associate Director, ERI would then combine project funds and remaining investment funds to hire support personnel who would contribute to both a specific project and broader ERI efforts. This model has worked well for ERI in the past.

Proposals submitted, new project funding, annual sponsored program expenditures, student and personnel support, energy related course or course content development, and new hires assisted will all be tracked. Given the level of investment requested, maintaining or slightly expanding the historic expenditure level (which will require a constant influx of new projects funded) is a reasonable goal. It is anticipated that these activities will require ramp-up. The process starting from Idea conception to a funded proposal typically takes a minimum of eight months and many proposals require a second submission to be successful extending the timeline to two years. A minimum of three years for assessment is required.

The ERI Associate Director position can be eliminated if not suitably productive.

SIGNATURES

Dept Head Priority (please circle one): Very High High Medium Low Very Low					
Dean/Director Priority (please circle one): Very High High Medium Low Very Low					
<div> <div>Tom McCoy</div> <div>  </div> <div>11/11/12</div> </div>					
Executive/VP Priority (please circle one): <u>Very High</u> High Medium Low Very Low					